

UNITED STATES ARMY - BAYLOR UNIVERSITY  
PROGRAM IN HEALTHCARE ADMINISTRATION

**RETROSPECTIVE ANALYSIS OF PROMOTIONAL MARKETING  
MEDIUMS FOR TRICARE PRIME IN TRICARE REGION 11**

A GRADUATE MANAGEMENT PROJECT  
IN PARTIAL FULFILLMENT OF THE REQUIREMENTS  
FOR A MASTERS DEGREE IN HEALTHCARE ADMINISTRATION

BY

MAJOR STEVEN H. CARPENTER

UNITED STATES ARMY MEDICAL SERVICE CORPS

MADIGAN ARMY MEDICAL CENTER

TACOMA, WASHINGTON

FEBRUARY 1997

20000107 027

REPORT DOCUMENTATION PAGE			Form Approved OMB No. 0704-0188	
Public reporting burden for this collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302, and to the Office of Management and Budget, Paperwork Reduction Project (0704-0188), Washington, DC 20503.				
1. AGENCY USE ONLY (Leave blank)		2. REPORT DATE FEBRUARY 1997		3. REPORT TYPE AND DATES COVERED FINAL REPORT (08-96 to 07-97)
4. TITLE AND SUBTITLE GRADUATE MANAGEMENT PROJECT (GMP) "RETROSPECTIVE ANALYSIS OF PROMOTIONAL MEDIUMS FOR TRICARE PRIME IN TRICARE REGION 11"			5. FUNDING NUMBERS	
6. AUTHOR(S) MAJOR STEVEN H. CARPENTER, MEDICAL SERVICE				
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) MADIGAN ARMY MEDICAL CENTER ATTN: MCHJ-DCA/CS TACOMA, WA 98431			8. PERFORMING ORGANIZATION REPORT NUMBER  7-97	
9. SPONSORING / MONITORING AGENCY NAME(S) AND ADDRESS(ES) US ARMY MEDICAL DEPARTMENT CENTER AND SCHOOL BLDG 2841 MCCS HRA US ARMY BAYLOR PROGRAM IN HCA 3151 SCOTT ROAD FORT SAM HOUSTON, TEXAS 78234-6135			19. SPONSORING / MONITORING AGENCY REPORT NUMBER	
11. SUPPLEMENTARY NOTES				
12a. DISTRIBUTION / AVAILABILITY STATEMENT APPROVED FOR PUBLIC RELEASE: DISTRIBUTION IS UNLIMITED			12b. DISTRIBUTION CODE	
13. ABSTRACT (Maximum 200 words) This study provides retrospective market research information about the population who enrolled in TRICARE Prime in TRICARE Region 11 and the advertising mediums used to promote enrollment in the TRICARE Prime program. Computerized data elements from a population of over 120,000 enrollment forms provided demographic information about the enrollees and performance of the various advertising mediums. The period of enrollment spanned the timeframe from March 1, 1995 until August 30, 1996. The Military Presentation, the Mail, the Base Newspaper and the TRICARE Service Center were the most popular responses among respondents to a question about how they heard about TRICARE Prime. The observed occurrence of the responses to the advertising question which included the Medical Provider, Other Media, the Civilian Newspaper, the Civilian Presentation, and the CHAMPUS Explanation of Benefits Form were less than an expected frequency of responses. An attempt was made to determine if demographic characteristics were related to the various advertising mediums. Analysis indicated that some statistically significant relationships existed, however the measures of association were extremely low. This study improves understanding about TRICARE Advertising and those who enroll in TRICARE Prime.				
14. SUBJECT TERMS MARKETING, TRICARE ADVERTISING, PROMOTIONAL MEDIUMS, TRICARE SEGMENTATION			15. NUMBER OF PAGES 80	
			16. PRICE CODE	
17. SECURITY CLASSIFICATION OF REPORT N/A	18. SECURITY CLASSIFICATION OF THIS PAGE N/A	19. SECURITY CLASSIFICATION OF ABSTRACT N/A	20. LIMITATION OF ABSTRACT	

## ACKNOWLEDGMENTS

This Graduate Management Project was made possible with the assistance of many individuals. My Preceptor, Colonel William R. Cahill, Chief of Staff, Madigan Army Medical Center, provided me with resources, leadership, patience, guidance and the latitude to complete this project. The assistance of Colonel Van R. Booth, Chief of Staff, Northwest Regional Medical Command, was invaluable. Colonel Booth's advice in ensuring this research provided the appropriate focus and depth significantly improved the timeliness of the final report.

Members of the Command Group of Madigan Army Medical Center were most gracious during the conduct of this research and my Residency year. Their cheerful hospitality extended to me while I was a guest in their office provided an environment conducive to learning and scholarship. My fellow classmate, Lieutenant Paul Toland, United States Navy, was a valuable sounding board and made my Residency year at Madigan Army Medical Center an enjoyable experience.

My Faculty Advisor at the US Army-Baylor Program, Lieutenant Colonel Timothy I. McCarthy, is acknowledged for his years of mentoring and moral support during my tenure as his former Chief of Personnel Management, 18th Medical Command, Korea, and with the Army-Baylor Program. My sincere thanks are extended to the faculty and staff of the Army-Baylor Program for providing me with the requisite skills of a Healthcare Administrator. Among these individuals include Lieutenant Jody Rogers, PhD., Lieutenant Colonel Bernie Kerr, PhD., United States Air Force, and Major Mark Perry, PhD., United States Army.

I wish to thank previously and presently assigned individuals to the United States Army Medical Service Corps Branch, Personnel Command. These individuals include Colonel Tom Harrison, Lieutenant Colonel Robert Foster, Lieutenant Colonel Robert Dubay, and Ms. Jeannette Clement. These individuals are acknowledged for their willingness to invest a Baylor Education in me and seeing some potential that I may be able to make greater contributions to the Army Medical Department.

Others who contributed more directly to this project include Mr. Chris Hober, Chief of Marketing, TRICARE Region 11, Fort Lewis, Washington; Mr. David C. Prillwitz and Mr. Bill Hardison, Foundation Health Federal Systems, Rancho Cordova, California; Mr. Richard Belamy and Ms. Sue Golding, TRICARE Service Office, Aurora, Colorado; and Ms. Elizabeth Pulos, PhD., Department of Clinical Investigations, Madigan Army Medical Center who assisted me ensure the statistical components of this research were appropriate and accurate.

Finally and most importantly, I wish to acknowledge the contributions of my wife Hye Suk Carpenter, and our children, Steven and Christine, for their many sacrifices while I pursued this research and completion of the Masters Degree requirements of the Army-Baylor Program in Healthcare Administration. These three important people in my life provide me with the inspiration and drive to achieve goals that I previously thought were not possible.

## **ABSTRACT**

This study was designed to provide retrospective market research information about the population who enrolled in TRICARE Prime and the advertising mediums used to promote enrollment in TRICARE Prime in Region 11. TRICARE Prime is the Health Maintenance Organization health benefit option for eligible beneficiaries of the Military Health Services System. Region 11 comprises the geographic areas of Washington State, Oregon, and Northern Idaho. Computerized data elements from a population of over 120,000 enrollees that were contained within the TRICARE Prime Enrollment Forms of these individuals were obtained and analyzed to obtain information about the various mediums employed to advertise TRICARE Prime and demographics of the population who enrolled in the program during the period March 1, 1995 until August 30, 1996.

Statistical analysis of the data revealed the observed responses of some advertising mediums were more prominent than their expected value. It appears the Military Presentation, the Mail, the Base Newspaper and the TRICARE Service Center were the most popular responses among respondents to a question about how they heard about TRICARE Prime. The observed occurrence of the responses to the advertising question which included the Medical Provider, Other Media, the Civilian Newspaper, the Civilian Presentation, and the Civilian Health and Medical Benefits Program for the Uniformed Services (CHAMPUS) Explanation of Benefits Form were below their expected frequency.

An attempt was made to segment the market into various demographic characteristics through statistical association of demographic characteristics of population

with the various promotional mediums used to advertise TRICARE Prime. Some statistically significant relationships between advertising mediums and demographic variables were identified, however, these association measures were extremely low. Perhaps the greatest value of this study was its ability to provide insights and trends about the demographics of those who enrolled in the program as well as the performance of the various advertising mediums used to promote TRICARE Prime.

The Office of the Department of Defense for Health Affairs Marketing Action Plan identifies a need for immediate proactive marketing of TRICARE to ensure the future continued success of military medicine. This study serves to improve understanding about the various segments of the military healthcare market and the means used to advertise programs that meet the healthcare needs of the beneficiaries residing in that market.

## TABLE OF CONTENTS

ACKNOWLEDGMENTS .....	i
ABSTRACT.....	iii
TABLE OF CONTENTS.....	v
LIST OF TABLES.....	vii

### Chapter

1. INTRODUCTION .....	1
Background .....	1
Conditions Which Prompted the Study .....	4
Statement of the Problems or Questions .....	6
Literature Review.....	6
Advertising.....	7
Personal Selling .....	9
Segmentation.....	12
Purpose (Variables/Working Hypothesis) .....	15
2. METHOD AND PROCEDURES.....	18
3. THE RESULTS .....	23
Descriptive Statistics of TRICARE Prime Population Enrolled in Region 11 .....	23
Sponsor Gender.....	23
Active Duty Sponsor.....	24
Sponsor Pay Grade.....	25
Branch of Service.....	26
Active Duty Reserve .....	28
Sponsor Deceased .....	29
Sponsor Retired.....	30
Retired Sponsor Enrolling.....	31
Other Healthcare Coverage.....	32
Enrolled in Program for the Handicapped (PFTH).....	33
Selected Prime Over Other Insurance .....	34
Last Used CHAMPUS .....	35
Frequency of Response to Advertising Medium .....	36
Distribution of Responses of Promotional Medium: The First Hypothesis.....	38
Distribution of Responses of Stratified Demographic Variables Within Each Promotional Medium: The Second Hypothesis .....	40
The Military Presentation .....	41
The Mail.....	42

The Base Newspaper.....	43
The TRICARE Service Center.....	44
Medical Provider.....	45
Other Media .....	46
The Civilian Newspaper .....	47
The Civilian Presentation.....	48
The CHAMPUS Explanation of Benefits (CEOB) / Claim Form .....	50
 4. DISCUSSION .....	 52
Our Customers .....	53
Advertising Mediums.....	55
Limitations of the Study .....	59
 5. CONCLUSIONS AND RECOMMENDATIONS .....	 62
 Appendix	
A. Geographical Locations of TRICARE Regions.....	66
B. TRICARE Prime Enrollment Application .....	67
 REFERENCE LIST .....	 69



## LIST OF TABLES

### Table

1-1. Possible responses collected by FHFS to the question "Where did you hear about TRICARE Prime?".....	5
1-2. Profile of HMO choosers compared to fee for service choosers across five methods of presenting information about the HMO.....	11
1-3. Common Market Segmentation Bases and their Components .....	13
1-4. First Working Hypothesis: Distribution of Occurrence of each Promotional Medium.....	16
1-5. Second Working Hypothesis: Interaction between Promotional Medium and Demographic Variables.....	17
2-1. Data elements requested from FHFS .....	19
3-1. Sponsor Gender.....	24
3-2. Active Duty Sponsor.....	25
3-3. Sponsor Pay Grade.....	26
3-4. Branch of Service .....	27
3-5. Active Duty Reserve.....	28
3-6. Sponsor Deceased .....	29
3-7. Sponsor Retired.....	30
3-8. Retired Sponsor Enrolling .....	31
3-9. Other Healthcare Coverage.....	32
3-10. Enrolled in Program for the Handicapped.....	33
3-11. Selected Prime Over Other Insurance.....	34
3-12. Last Used CHAMPUS.....	36
3-13. Frequency of Advertising Medium Response.....	37

# Table

3-14. Expected and Observed Distribution of Promotional Mediums .....	39
3-15. The Military Presentation .....	41
3-16. The Mail.....	42
3-17. The Base Newspaper .....	43
3-18. The TRICARE Service Center .....	44
3-19. Medical Provider .....	45
3-20. Other Media .....	47
3-21. Civilian Newspaper .....	48
3-22. The Civilian Presentation .....	49
3-23. The CEOB/ Claim Form .....	51
4-1. Demographic Characteristics of Sponsors of TRICARE Prime Enrollees in TRICARE Region 11.....	53
4-2. Significant Associations between Advertising and Demographic Variables .....	57

## **CHAPTER 1**

### **INTRODUCTION**

#### Background

The United States Military Health Services System (MHSS) is responsible for providing health benefits to more than 8.3 million people at an annual cost of about \$15 billion. In 1995, roughly twenty-four percent of the MHSS budget (\$3.6 billion) was used to fund a Department of Defense (DoD) administered insurance-like program called the Civilian Health and Medical Program for the Uniformed Services (CHAMPUS). CHAMPUS provides a means for non-active duty beneficiaries who are eligible for healthcare to obtain medical services from private sector healthcare providers. CHAMPUS is comparable to private-sector indemnity (fee-for-service) health benefits plans, requiring beneficiaries to pay for care up to an annual deductible amount, and then pay a portion of the remaining costs; however, beneficiaries are not required to pay premiums for CHAMPUS (GAO 1995).

A recent trend mandating improved efficiencies in United States federal government programs and skyrocketing healthcare costs for the provision of medical care created a climate fostering an evolution in healthcare delivery within the DoD. The National Defense Authorization Act of 1993 directed DoD to implement a program which includes a component modeled on Health Maintenance Organization (HMO) plans offered in the private sector and other similar government health insurance programs. HMOs employ efficient management practices which improve quality and access to healthcare while concurrently decreasing costs for delivery of healthcare.

This new DoD healthcare program, called TRICARE, is believed to be a cost-effective method for delivery of the healthcare benefit. The objectives of TRICARE are to expand access to care, assure high quality care, control healthcare costs for patients and taxpayers alike, and improve medical readiness (DoD Health Affairs 1996). TRICARE offers beneficiaries the choice between three options for delivery of their healthcare. These options are TRICARE Prime (the HMO option), TRICARE Standard, and TRICARE Extra (a Preferred Provider-like option). TRICARE Prime enrollees agree to have their care managed by an assigned Primary Care provider. Beneficiaries are provided low out-of-pocket cost healthcare through an integrated network of military and contracted civilian providers. TRICARE Standard is the same fee-for-service CHAMPUS program that existed prior to the implementation of the TRICARE program. While TRICARE Standard provides beneficiaries with the greatest freedom in selecting civilian physicians, it also has the greatest beneficiary cost share. TRICARE Extra is a preferred provider option, through which beneficiaries receive a five-percent discount on the Standard option cost of care when they choose a medical provider from the contractors' network (GAO 1995).

TRICARE Prime provides an option for beneficiaries who choose to enroll in the program to reduce their out-of-pocket costs and receive a uniform benefit. Enrollment of eligible active duty family members along with military retirees and their family members under the age of sixty-five in the TRICARE Prime option is voluntary. Enrollees are locked into the program for one-year periods and have the option to reenroll on an annual basis. TRICARE Prime is the most cost effective option for the MHSS for the delivery of healthcare benefits. It is essential that this option be made attractive to enrollees so that the efficiencies of this option can be maximized.

If the TRICARE program falls short of its stated objectives, other options, such as including military beneficiaries under the Federal Employees Health Benefits Program, may serve as an alternative to TRICARE (GAO 1995). It is incumbent upon those agencies and activities orchestrating the TRICARE program to increase and sustain voluntary enrollment of CHAMPUS eligible beneficiaries into the TRICARE Prime program to assure survival of the MHSS as it exists today. An essential component for assuring the viability of TRICARE requires marketing to be at the core of the organizational strategy.

The corporate organizational infrastructure emplaced to orchestrate the TRICARE Program has several tiers beginning at DoD with the Office of the Assistant Secretary of Defense for Health Affairs (OASDHA). The Assistant Secretary of Defense (Health Affairs) directs the distribution of federal funds to the Services (i.e., Army, Navy, and Air Force). The individual Services allocate funds to their facilities (GAO 1995). Each military service is headed by a Surgeon General who administers and operates their own respective military facilities. DoD reorganized the military delivery system into 12 separate geographic joint-Service regions. Appendix A contains a diagram of the locations of these regions. A new administrative organization, the Lead Agent, was created in each region to monitor and coordinate the delivery of healthcare. Lead Agents have broad responsibilities for planning, coordinating, and monitoring the care delivered throughout the region by medical facilities from all three Services as well as by contract providers (GAO 1995). Each Lead Agent works with a regional contracted civilian healthcare organization who establishes and maintains provider networks, provides enrollment services, and performs other services that are negotiated within a managed care support contract. The regional contractor is compensated for its services by the Office of the Assistant Secretary of Defense for Health Affairs.

The Office of the Assistant Secretary of Defense for Health Affairs resources a Marketing Office composed of members from all the military services. The mission of this office is to research, prepare, and coordinate the implementation of a DoD program to educate and inform 8.3 million total direct care eligible beneficiaries and their providers worldwide regarding all aspects of TRICARE. An early priority of the Health Affairs Marketing Office was the development of a Marketing Office Action Plan. The DoD Health Affairs Marketing Office Action Plan identifies a need for immediate proactive marketing of TRICARE to ensure the future continued success of military medicine. "Successful organizations rely heavily on designing products and services in terms of target market's needs and desires, and on using effective communication and distribution to inform, motivate, and service the market" (Health Affairs 1996).

#### Conditions Which Prompted the Study

The 1996 DoD Health Affairs Marketing Office Action Plan identifies a need to "communicate with customers that their needed products and services are available and where" (DoD Health Affairs 1996). One of the stated objectives of the Health Affairs Marketing Office Action Plan is to provide the corporate leadership of the MHSS with timely, accurate market information (e.g., opinions, attitudes, beliefs, trends, level of understanding, environmental factors, etc.) (DoD Health Affairs 1996). This study is an attempt to assist the TRICARE Community in achieving that objective by providing market research information about TRICARE Prime enrollees and the marketing medium prompting them to enroll in the program.

Region 11, comprising the geographic region of Washington State, Oregon, and Northern Idaho, was the first region to implement the TRICARE Program. The Region 11 program began on March 1, 1995. Foundation Health Federal Services (FHFS) is the

primary managed care support contractor for Region 11. FHFS administers the enrollment process for TRICARE Prime in fulfillment of their terms of their contract. Marketing related information was obtained from enrollees of the TRICARE Prime program during the process of completing a standardized enrollment form. A sample of this enrollment form is in Appendix B. Question number 22 of the enrollment form asks the question: Where did you hear about TRICARE Prime? Enrollees check a block on the enrollment form which indicates how they heard about TRICARE Prime. Table 1-1 contains the array of possible responses from which a respondent has to choose. Each response represents the various mediums that communicate the TRICARE message to customers. A medium is defined as the form used for communication (i.e. television, radio, direct mail, magazines, and newspapers) (Berkowitz 1996).

Table 1-1. Possible responses collected by FHFS to the question  
“Where did you hear about TRICARE Prime?”

Base Newspaper
Civilian Newspaper
Other Media
Mail
TRICARE Service Center
Civilian Presentation
Medical Provider
CHAMPUS Explanation of Benefits (CEOB) Claim Form
Military Presentation
Military Treatment Facility (MTF)? Which MTF _____?

Analysis of the collection of Prime enrollee responses to the marketing question may provide information which evaluates the effectiveness of the various mediums employed to promote TRICARE Prime to eligible beneficiaries of the MHSS. In addition, it may be possible to improve understanding about the relationship of

demographic factors of the various segments of the enrolled population and the mediums used for promoting the TRICARE Prime program. Analysis of this data will provide information about TRICARE Prime enrollees and feedback about the historical performance of various mediums used to communicate the TRICARE Prime message.

### Statement of the Problems or Questions

Marketing related information has been collected from all of Region 11's TRICARE Prime population since enrollment began on March 1, 1995. Region 11 encompasses the geographic areas of the states of Washington, Oregon, and Northern Idaho. Analysis of this information will provide insights about who are customers and identification of trends in promoting the TRICARE Prime program within Region 11. Are all communication mediums identified on the Prime enrollment form of equal utility within TRICARE Region 11 or do beneficiaries converge upon certain mediums more frequently than others? Are there any trends that are indicative of how the majority of enrollees heard about TRICARE Prime? Finally, are demographic factors associated with the various mediums promoting TRICARE Prime?

### Literature Review

Marketing involves more than just "selling" or "advertising" (Health Affairs 1996). Marketing is defined as the process of planning and executing the conception, pricing, promotion, and distribution of ideas, goods, and services to create exchanges that satisfy individual and organizational objectives (Berkowitz 1996). There has never been a greater need for hospitals to market themselves than now, as they adjust to the economic realities of managed care and governmental reform (Jones 1995). The practice



of marketing is composed of many components which include: identifying customers and their needs, developing products and services to meet customer needs, communicating to customers that their needed products are available and where they can be found, providing products and services in a customer-satisfying manner, and measuring the degree to which customer needs are satisfied.

Promotion is the means by which healthcare organizations communicate to their customers that their needed products are available and where they can be found. Promotion, which was the primary focus of marketing in the past, is still of importance, but has grown increasingly complex (Berkowitz 1996). Now, a full range of promotional tools are necessary to competitively market a product or service (Berkowitz 1996). Berkowitz identifies tools commonly used in promotion that include advertising and personal sales (Berkowitz 1996). Marketing data collected in Region 11 using Question 22 of the enrollment form provides the basis for an evaluation of advertising and personal sales activities. Therefore, this research will focus upon the tools of advertising and personal selling and their relationship to the various segments of TRICARE Prime's target audiences within Region 11.

### Advertising

Advertising is defined as any directly paid form of nonpersonal presentations of goods, services and ideas (Berkowitz 1996). Advertisers pay for communication of a message to a targeted audience. Advertising mediums include newspapers, radio, television and billboards. One of the limitations of advertising is its nonpersonal nature which makes feedback difficult. Another limitation is that advertising messages often face credibility problems with consumers (Berkowitz 1996). Advertising is reported to be highly effective under certain circumstances. It is most effective when buyer

awareness is low about a service, when a service is new, when a service is not commonly advertised, and when industry sales are rising. Advertising is also effective when choosers are able to determine significant differences between products and it is possible for this difference to be highlighted through use of the mass media.

Advertising by HMOs has become increasingly common within the United States (Brett 1992). Many hospitals have recognized the importance of a feeder system in building the name recognition of the facility and promoting patient accessibility (Williams and Torrens 1993). As a result, hospitals are engaging in more marketing and advertising activities that increase the visibility of their institutions including direct mail advertising, use of billboards, and broadcasting on radio and television (Williams and Torrens 1993).

Ethical and controversial concerns are addressed in healthcare advertising literature. One area of concern is the creation of unnecessary demand for healthcare services. The American Hospital Association (AHA) published a statement about the purposes of hospital advertising that may be applicable to the managed care environment as well. The AHA indicates that advertising should provide "public education about available services, public education about healthcare, public accountability, public support, and employee recruitment" (AHA 1984 and Rakich 1994). "Comparisons with other providers, claims of prominence, and promotion of individual professionals are to be avoided" (AHA 1984 and Rackich 1994). This approach to healthcare advertising serves to eliminate unnecessary demand while seeking out and serving those with a legitimate need for healthcare.

"Healthcare providers often treat communications as an after thought when it comes to strategic planning, but that is a mistake in the 1990's" (Jones 1995). The author indicates that as providers and healthcare organizations adapt to the new managed care

environment, marketing will be of even greater importance. "In the reform era, advertising will still have a role to play, but its content will change" (Jones 1995). Jones contends it is important to communicate to people about the services available and how to access them. She also indicates community outreach serves a vital function in the communication process.

Brett provides an argument that states the case against healthcare advertising. "Advertising by HMOs does not expand the options of most potential enrollees, and it may promote the useless movement of patients among health plans" (Brett 1992). "Second, whether or not such advertising influences choices, it may have secondary consequences that are undesirable, including the creation of unfair expectations among patients, the excessively commercialized portrayal of medical care, and the addition of yet another administrative expense to the healthcare economy" (Brett 1992). Brett's views are convincing because in 1993, the total marketing budget for all U.S. hospitals was estimated to be \$1.81 billion of which advertising represented \$768 million (Berkowitz 1996). In an era of limited resources for healthcare, sceptics of healthcare advertising would argue that these dollars could be diverted to programs that would have a direct impact upon improving the health of the population. Proponents of healthcare advertising argue this expense as a mere pittance in relation to the total amount of dollars expended on healthcare in the United States (Cahill 1997).

### Personal Selling

Personal selling is defined as any paid personal presentation of goods, ideas, or services. This tool uses a personal form of communication. Its strengths lie in the ability to allow for direct feedback from the consumer and the control over who receives the message. Its weaknesses are that it is one of the more expensive ways to promote a

product, the uniformity of the message is not always consistent, and the message may not be communicated in as efficient fashion as other methods to reach a larger audience.

Andrews et al. conducted a study about the effects of this method of presenting health plan information on HMO enrollment by Medicaid beneficiaries. This study looked at the effects of various mediums upon enrollment in a Medicaid HMO. The communication mediums examined included: "a printed brochure only; a printed brochure combined with a film presentation; a printed brochure combined with a presentation by a county eligibility worker; a printed brochure combined with a state representative; and a brochure combined with a presentation from an HMO representative" (Andrews et. al 1989). All mediums included a brochure and the last three mediums included a personal presentation. However, the presenters brought different motivations, approaches and expectations to the presentation because of their diverse occupational roles. The authors concluded that the strongest predictors for enrollment of a client into a Medicaid HMO across four of the five methods was dissatisfaction with current provider and lack of a regular source of healthcare such as a private physician. Education was significantly related to choice in the HMO representative group and almost reached significance in the film group. The researchers found that the hardest group to attract for enrollment in an HMO are those with a regular source of care; and the most effective way to attract these individuals was through the brochure with an HMO representative or state worker method. Andrews et al. developed a profile of HMO choosers across communication mediums that is displayed in Table 1-2.

Table 1-2. Profile of HMO choosers compared to fee for service choosers across five methods for presenting information about the HMO (Andrews et al. 1995).

Method / Medium	Profile Characteristics
<b>Brochure Only</b>	<ul style="list-style-type: none"> <li>- HMO choosers are less likely to have a private doctor.</li> <li>- HMO choosers are less likely to need care now.</li> <li>- HMO choosers are less likely to be satisfied with their current healthcare provider.</li> <li>- HMO are more likely to have a higher level of comprehension of the information.</li> </ul>
<b>Brochure and Eligibility Worker</b>	<ul style="list-style-type: none"> <li>- HMO choosers are less likely to have a private doctor and to be satisfied with their present source of care than Fee for Service choosers.</li> </ul>
<b>Brochure and HMO Representative</b>	<ul style="list-style-type: none"> <li>- HMO choosers are likely to have more years of education, to be without both a regular source of care and a private doctor, and to be less satisfied with their present source of care than Fee for Service choosers.</li> </ul>
<b>Brochure and Film</b>	<ul style="list-style-type: none"> <li>- HMO choosers are less likely to have a private doctor than Fee for Service choosers.</li> </ul>
<b>Brochure and State Worker</b>	<ul style="list-style-type: none"> <li>- HMO choosers are less likely to have a regular source of care and to be satisfied with their present source of care, but are more likely to have a higher level of comprehension of choice information than Fee for Service choosers.</li> </ul>

The patient-physician relationship has been identified as playing a major role in the decision to enroll in managed care programs (Berki 1980). Evidence indicates that closed-panel HMOs are most likely to attract enrollees who do not have established patient-physician relationships, and who tend to be members of younger families with a larger number of smaller children. These characteristics are often found in areas with high population mobility. Individuals and families new to a community have not had the opportunity to establish a private patient-physician relationship and they tend to be

younger. The closed panel HMO offers these beneficiaries assured access without having to search for sources of routine care in a new and unfamiliar community. Having the option available through the workplace and the ability to gain at least some information about the delivery characteristics of the HMO reduces the burden of searching for sources of care (Berki 1980). The open panel HMO, on the other hand, appears to be most appealing to those who already know the physicians within it and who can enroll and simultaneously maintain an already existing patient-physician relationship (Berki 1980).

Researchers have identified the importance of the patient-physician relationship, particularly among the elderly. The elderly may be unwilling to relinquish the long-term relationships they have established with their physicians through the years (Fogel 1995). Older patients are extremely loyal to their healthcare providers and are reluctant to disassociate themselves from providers they trust. Many aged do not want to change their established physician relationships and it is relatively costly for HMOs to target market their services to the aged (Feldstein 1993).

### Segmentation

One of the difficulties with healthcare marketing is there are many, very diverse “customers” to satisfy within the market (Duncan 1995). Segmentation is the process of identifying recognizable groups making up the market and then selecting a group as the target market (Duncan 1995). Several groups may be targeted, but each one requires different marketing activities and strategies to achieve customer satisfaction (Duncan 1995). Understanding market segmentation enables businesses to select a strategy that

can be managed more effectively and provide services that better suit the needs of their consumers (Marchack 1995).

Various segmentation “bases” can generally be grouped into three categories: demographic, geographic, and psychographic (Hiam 1992). Table 1-3 identifies the variables that are commonly used for market segmentation bases and the components of the base.

Table 1-3. Common Market Segmentation Bases and their Components (Marchack 1995).

<b>Market Segmentation Base</b>	<b>Components of the Base</b>
Demographic	Age Gender Family Life Cycle Income Occupation Race
Geographic Variables	City Type Climate Population
Psychographic Variables	Personality Type Buyer Preference Motivation Social Class

Demographic segmentation focuses upon defining the market based upon statistics which describe members of a population in terms of who they are, where they live, and the types of occupations they perform. Geographic segmentation capitalizes upon unique aspects of a population where they live to tailor the provision of healthcare services in a way that improves access of the population to healthcare. Psychographic segmentation targets aspects of lifestyle and social class, then directs the marketing medium to appeal to these characteristics of the population.

Andrews demonstrated demographics as predictive of information presentation. Demographic variables studied included marriage status, education, number of children,

access to a regular source of healthcare, access to a regular doctor, needs care now, dissatisfaction with present healthcare provider, number of doctor visits, and comprehension of the program (Andrews 1989).

Segmentation based upon gender has been shown to be a successful strategy. Women comprise a major segment of the healthcare audience because of their prominence in making healthcare decisions. According to Jones, "women make the healthcare decisions in three-quarters of the American households these days." "Realizing that, healthcare facilities are targeting female consumers in their outreach efforts" (Jones 1995). For example, many hospitals now realize that the local shopping mall is an excellent location for a healthcare information booth" (Jones 1995).

Geographic segmentation focuses upon the unique preferences of various geographic localities. An attempt to replicate an adult day care program established in San Francisco in 1971 for the elderly (known as the Program of All-Inclusive Care for the Elderly (PACE) ) failed to meet enrollment goals in seven other regions within the United States in 1995. The model which served as the basis for PACE was initiated in 1971 in San Francisco's China Town. The other sites located in East Boston, Massachusetts; Portland, Oregon; Columbia, South Carolina; Milwaukee, Wisconsin; Denver, Colorado; the Bronx; and Rochester, New York; failed in part because the targeted market did not have preferences for the model that was presented. This case study illustrates the importance of understanding the preferences of the target market (Fogel 1995).

Psychographic segmentation refers to lifestyle and social class. HMOs like PacifiCare of California claim to have been setting the standard for Medicare risk HMO health plans since 1985, when Secure Horizons, a division of PacifiCare, became one of the first health care plans in California to be awarded a Medicare-risk contract through



the federal Health Care Financing Administration (HCFA). Now available in five states, Secure Horizons appeals to the Medicare eligible market by arranging for quality, convenient, cost-effective health care services to their members. PacifiCare appeals to the elderly by sponsoring a range of events -- from health care seminars to fitness walks - - which promote the overall well-being of Medicare beneficiaries (PacifiCare 1997).

The TRICARE Marketing Plan does not formally segment its customers into demographic, , but an information paper contained in the Northwest Lead Agency Region 11 TRICARE Program Lessons Learned publication identified a segmented TRICARE audience consisting of: retirees and their family members who must pay an enrollment fee, family members of E4 (junior enlisted military personnel) and below, family members of E-5 (senior enlisted and officer military personnel), and those over the age of 65 (Region 11 Lead Agent 1995).

#### Purpose (Variables/Working Hypothesis)

This study will analyze marketing data collected by FHFS from enrollees in TRICARE Prime throughout Region 11. The purpose of this study is to produce descriptive statistical information which identifies how Region 11 Prime enrollees heard about the program; provide results of nonparametric statistical analysis of the responses of TRICARE Prime enrollees within Region 11 about how they heard about TRICARE Prime; and determine if demographic variables are predictive of how people hear about and choose to enroll in TRICARE Prime. This study will seek to provide a retrospective overview of historical promotional medium trends, identify characteristics of the total

market, identify segments within the market, and attempt to identify if segments within the market can predict convergence upon any particular promotional medium.

The first null hypothesis for this study is “the survey responses of the population, or segment thereof, are uniformly distributed among the various promotional mediums.” The alternate hypothesis is “the survey responses of the population, or segment thereof, are not uniformly distributed among the various promotional mediums.” Analysis of the null and alternate hypothesis will determine if there are statistically significant differences between an expected uniform distribution of the survey responses of the population or an observed nonuniform distribution of the survey responses of the population. The symbolic form of the null and alternate hypothesis is contained in Table 1-4.

Table 1-4. First Working Hypothesis: Distribution of Occurrence of each Promotional Medium.

<p><i>H1<sub>o</sub>: The survey responses of the population, or segment thereof, of the promotional mediums (M) is uniform -- that is, in terms of popularity of the promotional medium, each medium has an equal number of occurrences within the enrolled population.</i></p> $M1 = M2 = \dots M_n$
<p><i>H1<sub>a</sub>: The survey responses of the population, or segment thereof, of the promotional mediums (M) is not uniform -- that is, in terms of popularity of the promotional medium, each medium does not have an equal number of occurrences within the enrolled population.</i></p> $M1 \neq M2 \neq \dots M_n$

A second working hypothesis is “The observed frequency of survey responses of the population of TRICARE Prime enrollees, or segment thereof, stratified by the demographic variables are equal to the expected frequency of the survey responses of the population of TRICARE Prime enrollees within each of the promotional mediums.” The alternate hypothesis is “The observed frequency of survey responses of the population of TRICARE Prime enrollees, or segment thereof, stratified by demographic variables are not equal to the expected frequency of responses within each of the promotional mediums.” Analysis of the null and alternate hypothesis will determine if there are statistically significant differences between the observed and expected frequency of the survey responses of the population stratified by demographics. The symbolic form of the second working null and alternate hypothesis is contained in Table 1-5.

Table 1-5. Second Working Hypothesis: Interaction between each Promotional Medium (M) and Demographic (i) Variables

<p><i>H2<sub>0</sub>: The observed frequency of survey responses of the population stratified by demographic variables, or segment thereof, of the promotional mediums (M) <u>is equal to</u> the expected frequency of survey responses of the population.</i></p> $M1_i = M2_i = \dots M n_i$ <p><i>where i = the different demographic groups</i></p>
<p><i>H2<sub>a</sub>: The observed frequency of survey responses of the population stratified by demographic variables, or segment thereof, of the promotional mediums (M) <u>are not equal to</u> the expected frequency of survey responses of the population..</i></p> $M1_i \neq M2_i \neq \dots M n_i$

## **CHAPTER 2**

### **METHOD AND PROCEDURES**

Foundation Health Federal Systems, the primary contractor for TRICARE Region 11, obtains marketing related information from TRICARE Prime enrollees when they complete a standardized enrollment form (Appendix B). Question number 22 of the enrollment form asks: Where did you hear about TRICARE Prime? Table 1-1 identifies the potential responses from enrollees to this question which serves as the dependent variable for this study. Respondents "check the box" that best describes how they heard about TRICARE Prime when they complete their Prime Enrollment Form. Responses to enrollment form questions are entered into a database at FHFS Corporate Headquarters at the conclusion of enrollment processing.

Table 2-1 identifies the data elements from the Prime Enrollment Form serving as the independent variables for this study. The data elements in Table 1-1 along with those identified in Table 2-1 were requested from FHFS for analysis.

Table 2-1. Data elements requested from FHFS  
(Independent Variables)

Enrollment Form Question Number	Response
4	Sex (gender)
7	Is sponsor active duty?
8b	Sponsor Pay Grade
9	Branch of Service
10	Is sponsor an active duty reservist?
11	Is sponsor deceased?
12	Is sponsor retired?
13	Is retired sponsor enrolling?
18	Do you or your family members requesting enrollment have other health coverage including Medicare?
19	Did you or any family member choose TRICARE Prime instead of coverage through another source?
20	Are you or your family members requesting enrollment, participating in the Program For The Handicapped (PFTH)?
21	When was the last time you or eligible family members used Standard CHAMPUS?

Obtaining the data from FHFS requires coordination with the Lead Agent for Region 11 and consent from the TRICARE Service Office (TSO), formerly known as the Office of CHAMPUS, in Aurora, Colorado. The data was collected from approximately 120,000 Prime enrollees who are eligible beneficiaries of the Military Health Services System. Data collection was conducted from March 1, 1995 until August 30, 1996. Existence and analysis of data from the entire population of Prime enrollees within Region 11 ( $N \approx 120,000$ ) will serve to eliminate errors associated with sampling techniques and strengthen any potential conclusions that may be inferred from analysis of the data.

Security and confidentiality of the information used in this study will be maintained at all times. This data will be used only by the researcher and will be forwarded to the Region 11 Lead Agent upon completion of the study. Sensitive information such as enrollee Names and Social Security Numbers were not requested.

The data from FHFS will be in an American Standard Code Information Interchange (ASCII) format suitable for importing into a statistical software program. Analysis will be conducted using the Statistical Package for the Social Sciences (SPSS) for Windows, Release 7.0. Preliminary analysis of the data will consist of descriptive statistics that summarize and present the descriptive information about the responses of the population using charts, tables and a narrative interpretation.

The variables of this study are nominal types of data. This limits the types of analysis that may be conducted upon the data to nonparametric tests. Probably the most widely used nonparametric test of significance for nominal data is the Chi-square ( $\chi^2$ ) test (Cooper and Emory 1995).

After obtaining descriptive statistics (e.g. frequencies of responses), the first statistical test in this study will use the a 1 X 9 Chi-square Goodness of Fit statistic of cases across advertising medium. The  $\alpha = .05$  level of significance will be used for this and all other hypothesis testing.

The second test will use 1 X 9 Chi-square Goodness of Fit statistic to determine whether there is a relationship between each of the nine advertising mediums and each of the demographic variables. Demographic variables include: gender, active duty, pay

grade, active duty reservist, deceased, retired, retired sponsor enrolling, other health insurance, prime over other coverage, handicapped program, sponsor's branch of service (Air Force, Army, Coast Guard, Marines, Navy, National Oceanic and Atmospheric Administration, and Public Health Service), and Last Used CHAMPUS (12 months, 2 - 5 years, Over 5 years, and Newly Eligible). The variables "Branch of Service" and "Last Used CHAMPUS" are not dichotomous variables. Prior to conducting statistical testing, each one of these variables will be converted to dichotomous variables by recoding the data using "dummy variables" to reflect "1" meaning the presence of that variable and "0" to reflect the variable is not present.

Concerns regarding the reliability of the data in this study requires advisement. The best method to determine reliability of the data in this study is to readminister the Prime Enrollment application to the same enrollees a second time, then perform a correlation analysis to determine the strength of the relationship between the first and second administration of the enrollment form. However, readministering the enrollment form to enrollees not possible nor practical for the purpose of this study.

Content validity of a measuring instrument is the extent to which it provides adequate coverage of the topic under study (Cooper 1995). If the instrument contains a representative sample of the universe of subject matter of interest, then content validity is good (Cooper 1995). Berkowitz defines promotional medium as "form used for communication (television, radio, direct mail, magazines, and newspaper)" (Berkowitz 1996). It would appear that question 22 of the Prime Enrollment Application contains a

“representative sample of the universe of subject matter of interest.” Investigation indicates the format for the FHFS Prime Enrollment has remained unchanged since its genesis in 1989. The form was first used in pilot testing with a Federal Government healthcare contract called the CHAMPUS Reform Initiative (CRI).

Upon final analysis of available information and interpretation of data, a comprehensive brief and written report will be given to the researcher's Preceptor who is the Chief of Staff and Deputy Commander for Administration of Madigan Army Medical Center. A copy of the written report will be forwarded to the Region 11 Lead Agent and to Foundation Federal Health Systems.



## **CHAPTER 3**

### **THE RESULTS**

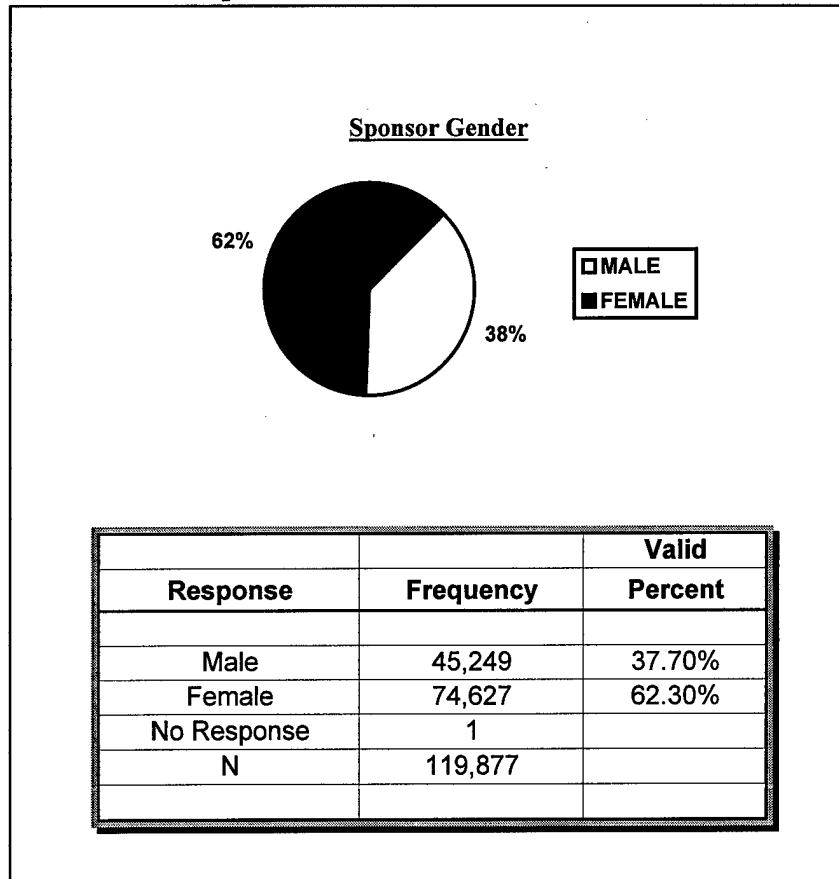
#### Descriptive Statistics of the TRICARE Prime Population Who Enrolled in Region 11

Descriptive statistics (frequency data) serve to classify and summarize characteristics of the “customers” who chose to enroll in TRICARE Prime from the beginning of March, 1995 until the end of August, 1996. Descriptive statistics in the form of frequencies for the variables of this project were produced by SPSS software for the data elements identified in Tables 1-1 and 2-1.

#### Sponsor Gender

Table 3-1 summarizes the response to question number 4 of the Prime Enrollment Application. Slightly more than 62% (N = 74,627) of the respondents indicated the Sponsor’s gender was Female, while slightly less than 38% (N = 45,249) indicated the Sponsor’s gender was Male.

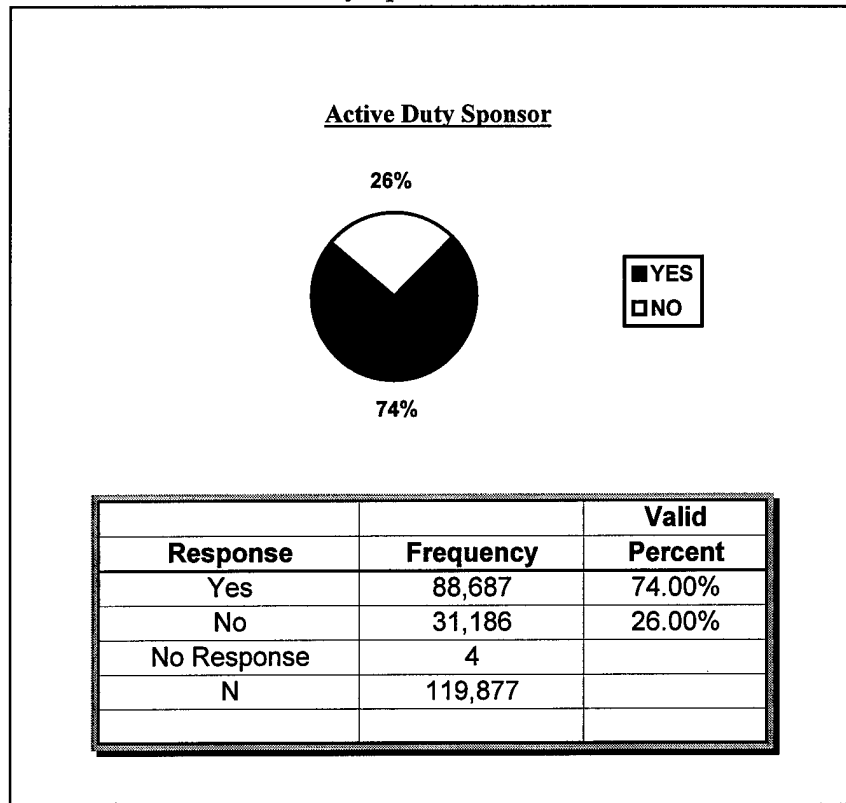
Table 3-1. Sponsor Gender



Active Duty Sponsor

Table 3-2 identifies aggregate responses to question number 7 of the Prime Enrollment Application indicating that about three-fourths of the Sponsors were active duty personnel (N = 88, 687) and one-fourth were military retirees (N = 31,186).

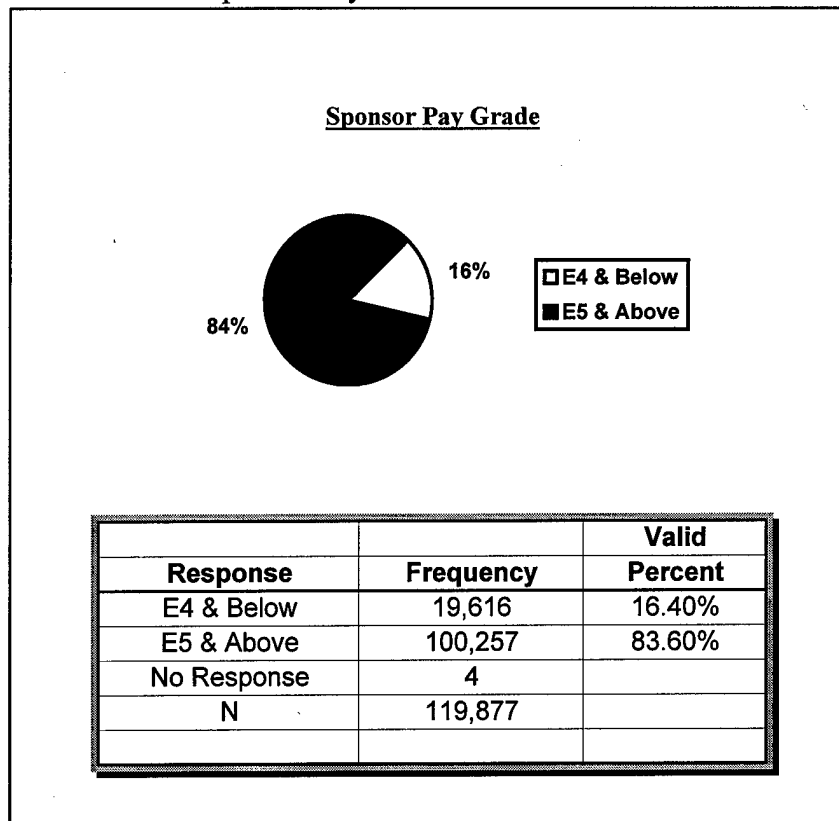
Table 3-2. Active Duty Sponsor



**Sponsor Pay Grade**

Table 3-3 identifies the distribution of Sponsor Pay Grade as contained in question number 8b of the Prime Enrollment Application. This data element was categorically coded in a dichotomous fashion representing those in the grades of “E-4 and Below” (N = 19,616) and “E-5 and Above (N = 100,257).” The vast majority of respondents (84 percent) indicated they were in the rank of “E-5 and Above.”

Table 3-3. Sponsor Pay Grade



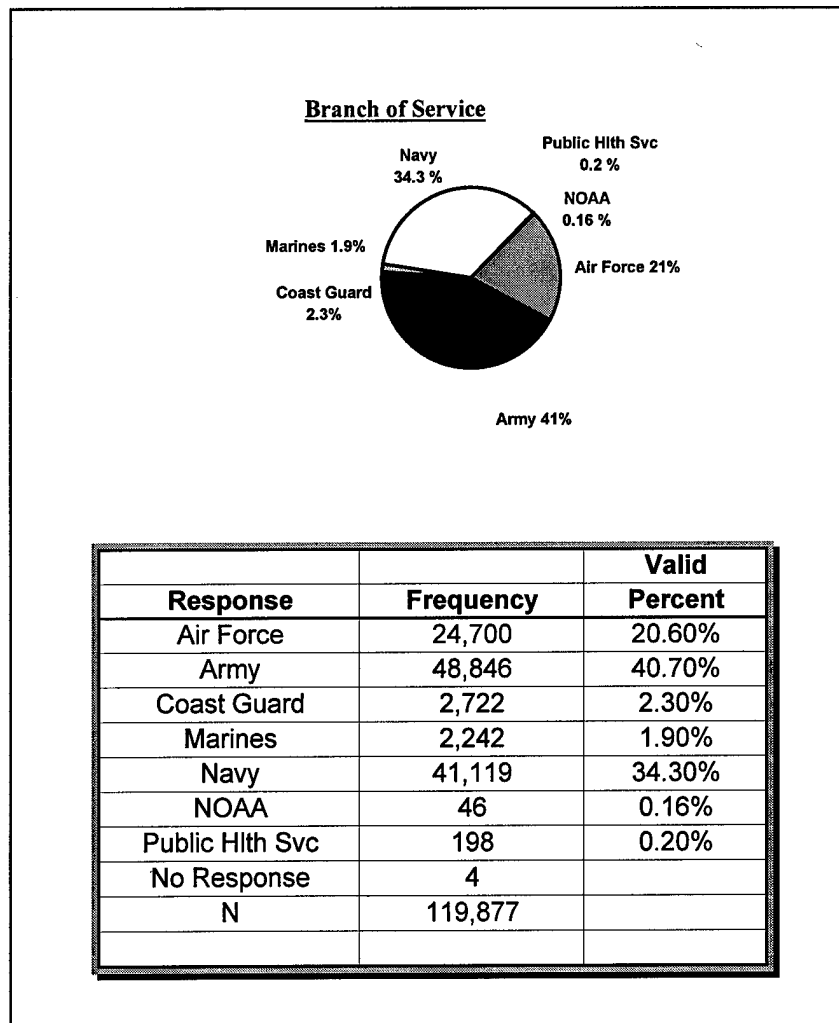
**Branch of Service**

Table 3-4 represents the distribution of the affiliation of the various military and civilian services of sponsors. The Army (N = 48,846) comprised the largest population of respondents, followed by Navy (N = 41,119), Air Force (N = 24,700), Coast Guard (N = 2,722), Marines (N = 2,242), Public Health Service (N = 198), and National Oceanic and Atmospheric Administration (NOAA) (N = 46). This data was originally coded

under the variable “Branch of Service” as: Air Force “1”, Army “2”, Coast Guard “3”, Marines “4”, Navy “5”, NOAA “6”, Unspecified “7”, and Public Health Service “8.”

This variable was later transformed into their five separate dichotomous variables for use in further statistical analysis.

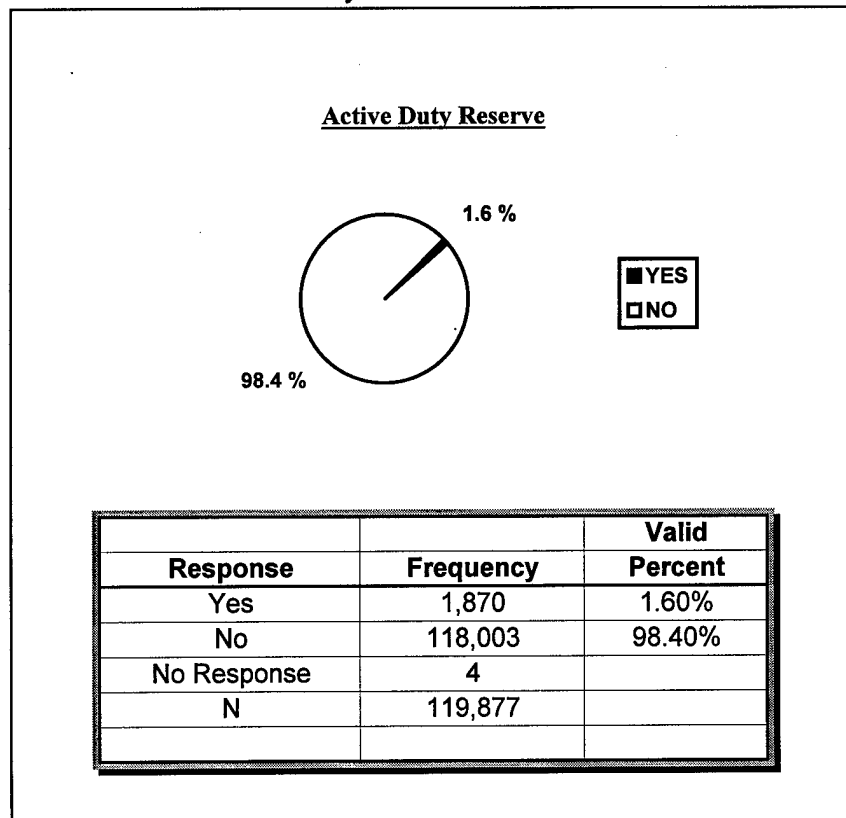
Table 3-4. Branch of Service.



### Active Duty Reserve

The Active Duty Reserve program represents a category of individuals who are employed in a full-time capacity with the Reserve Component forces of the United States. These individuals perform full-time duties with Reserve and National Guard units and retain the same medical benefits as active duty personnel. Table 3-5 represents the population of sponsors who are in the Active Duty Reserve category. This Active Duty Reserve population represents about two-percent of those who completed a Prime Enrollment Application.

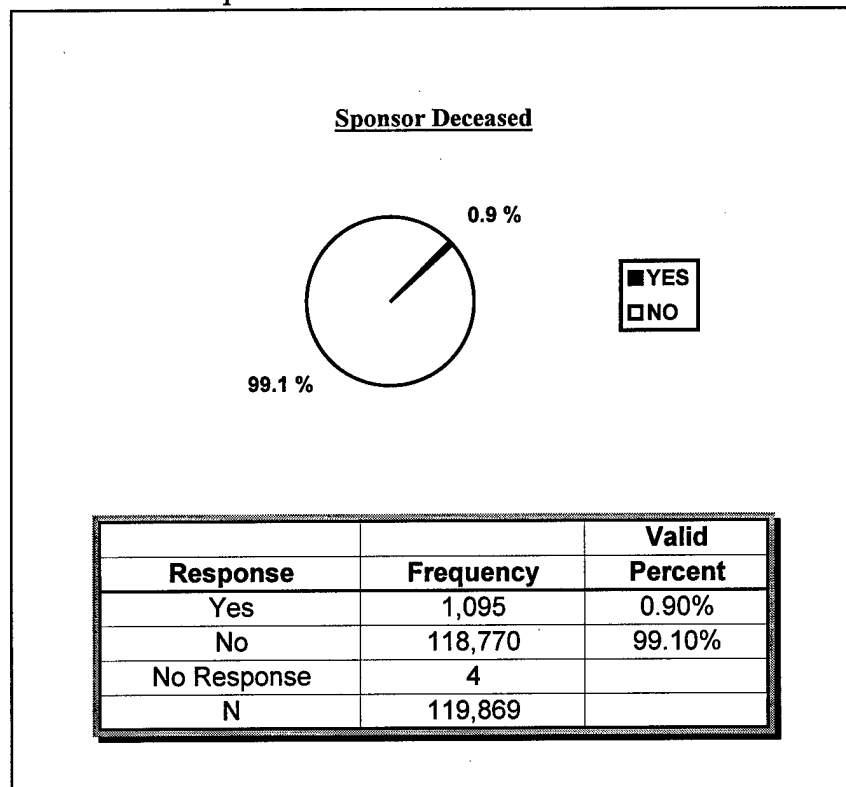
Table 3-5. Active Duty Reserve



### Sponsor Deceased

Table 3-6 represents the frequency of the population whose Sponsor was indicated as “Deceased.” This population represents the aggregate of responses derived from question number 11 of the Prime Enrollment Application. Less than one percent of the population (N = 1095) indicated the sponsor was deceased.

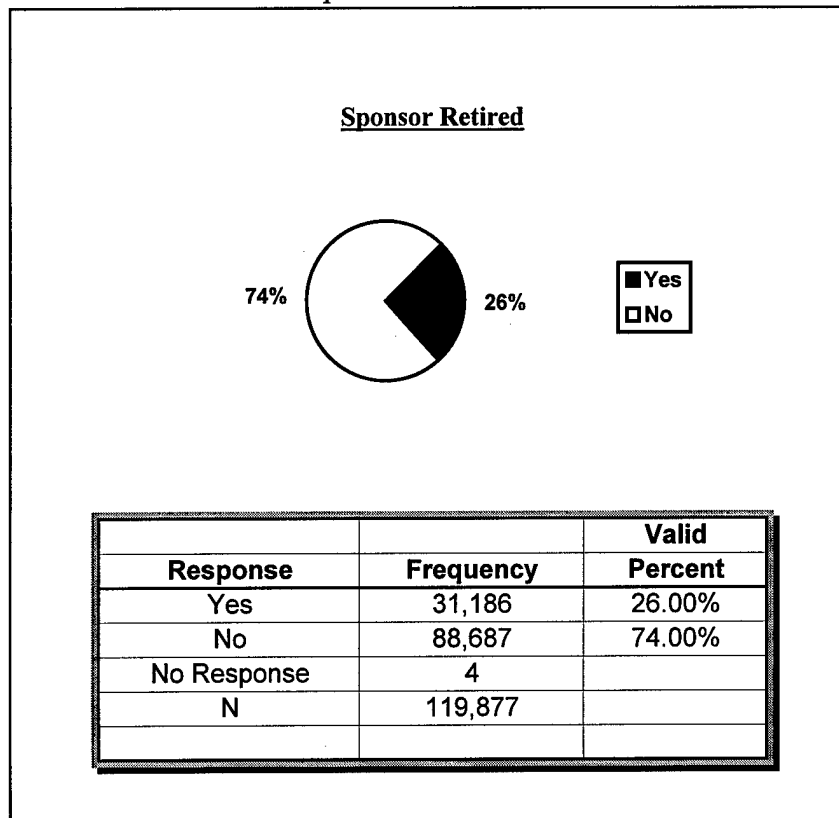
Table 3-6. Sponsor Deceased.



### Sponsor Retired

Table 3-7 represents the aggregate of the answers to question number 12 of the Prime Enrollment Application asking if the Sponsor is retired. This question is the converse of “Sponsor Active Duty” question (question 7). About one-fourth of the population of sponsors are listed as retired (N = 31,186).

Table 3-7. Retired Sponsor.

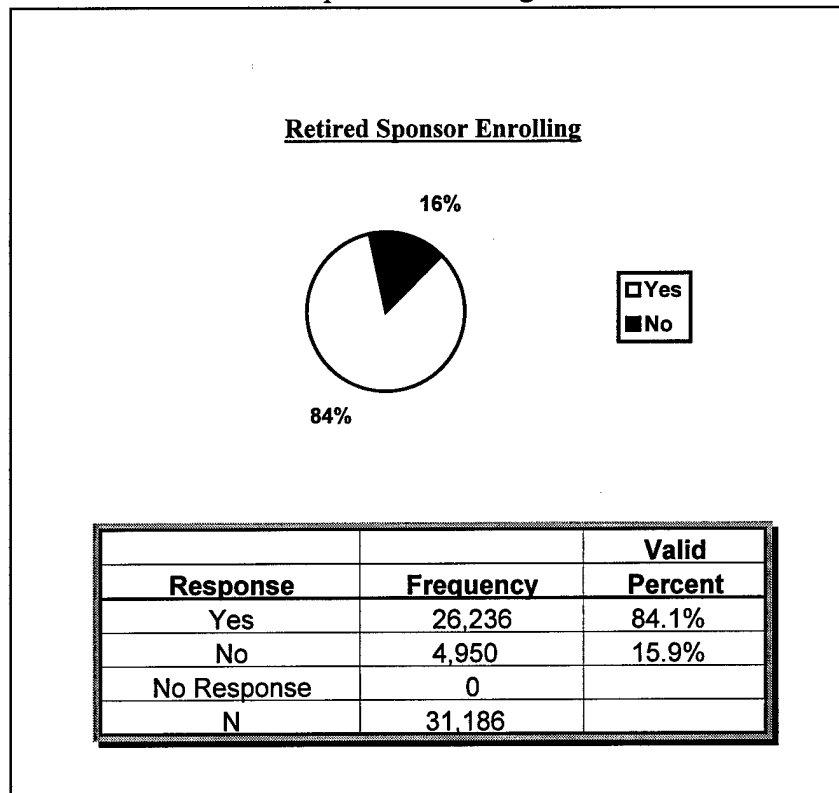




### Retired Sponsor Enrolling

Table 3-8 represents the frequency of the response to question number 13 of the Prime Enrollment Application about enrollment of the Retired Sponsor into the Prime Program. Over 84% (N = 26,236) of all sponsors where were military retirees elected to enroll in TRICARE Prime.

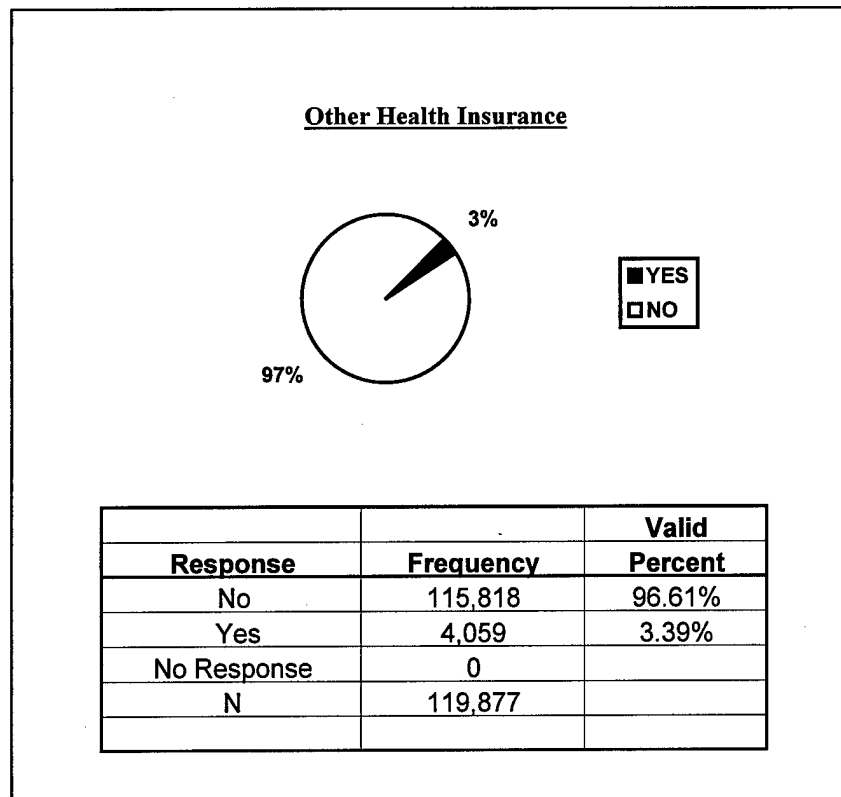
Table 3-8. Retired Sponsors Electing to Enroll in Prime.



### Other Healthcare Coverage

Table 3-9 reflects the frequency of responses for question number 18 of the Prime Enrollment Application. This question inquires if the sponsor or family members requesting enrollment have other health coverage including Medicare. Only 3.39 percent of respondents (N = 4,059) indicated they have other insurance.

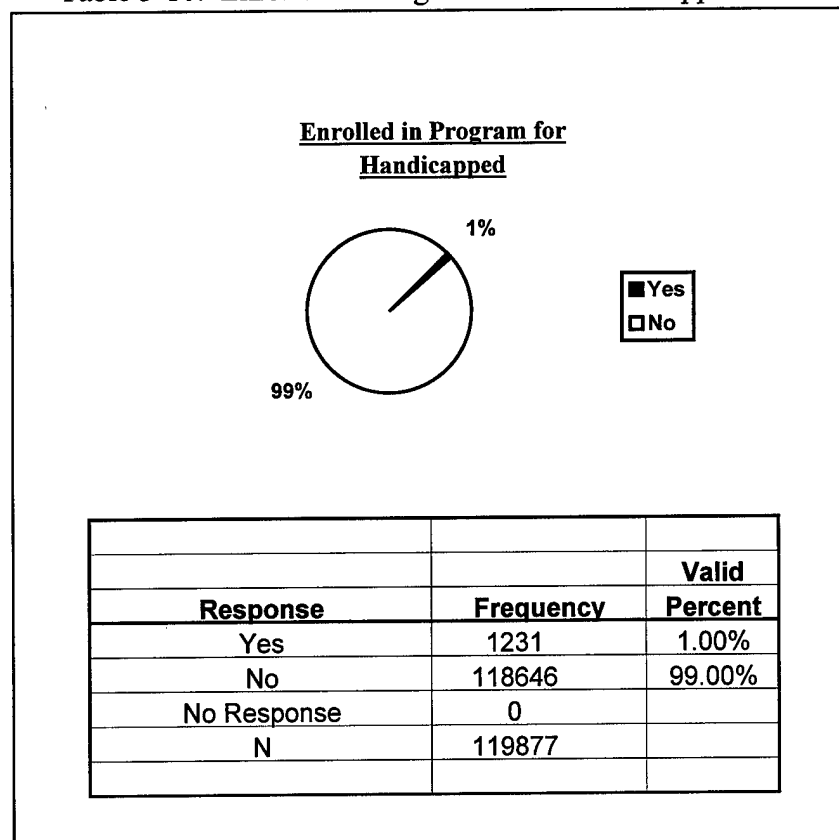
Table 3-9. Does the Sponsor or Family Members have Other Health Insurance.



### Enrolled in Program For The Handicapped (PFTH)

The PFTH provides financial assistance to active-duty families with severely handicapped members (CHAMPUS 1997). PFTH benefits are limited to moderately or severely retarded or seriously physically challenged family members. Table 3-10 provides an overview of the responses to question number 20 about enrollment in the PFTH. One percent of respondents (N = 1231) indicated they are enrolled in the program.

Table 3-10. Enrolled in Program for the Handicapped



### Selected Prime Over Other Insurance

Table 3-11 indicates the response to question number 19 of the Prime Enrollment Application. This question asks "Did you or any family member choose TRICARE Prime instead of coverage through another source?" About ninety-nine percent of the respondents indicated that they did select Prime TRICARE Prime over other insurance. The TRICARE Prime program appears to be an attractive choice to those who chose to enroll.

Table 3-11. Selected Prime Over Other Insurance.

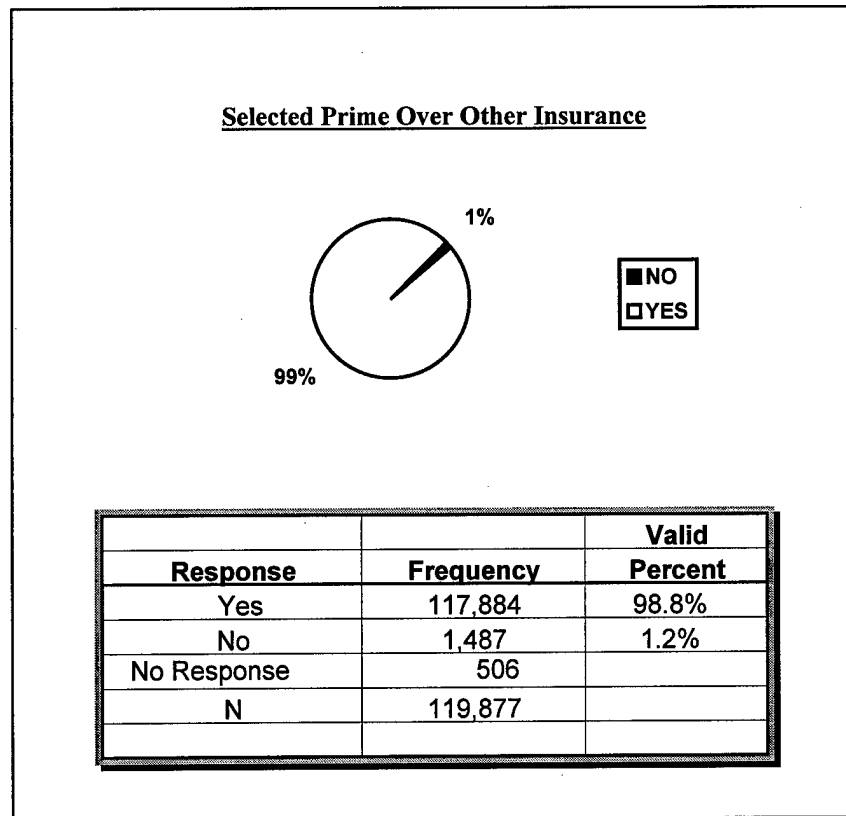
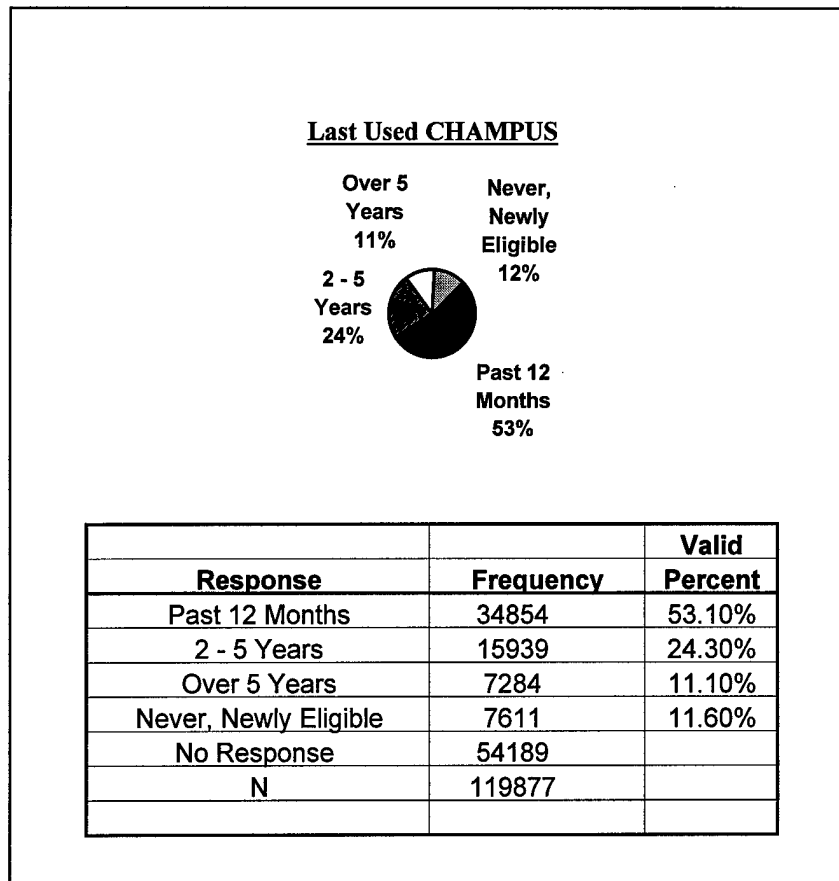


Table 3-12 provides an overview of the answer to question number 21 of the Prime Enrollment Form. This question asks “When was the last time you or eligible family members used Standard CHAMPUS?” Many people did not respond to this question (N = 54,189). However over half of those who did respond to the question indicated they last used Standard CHAMPUS within the last twelve months.

Table 3-12. Last Used CHAMPUS.

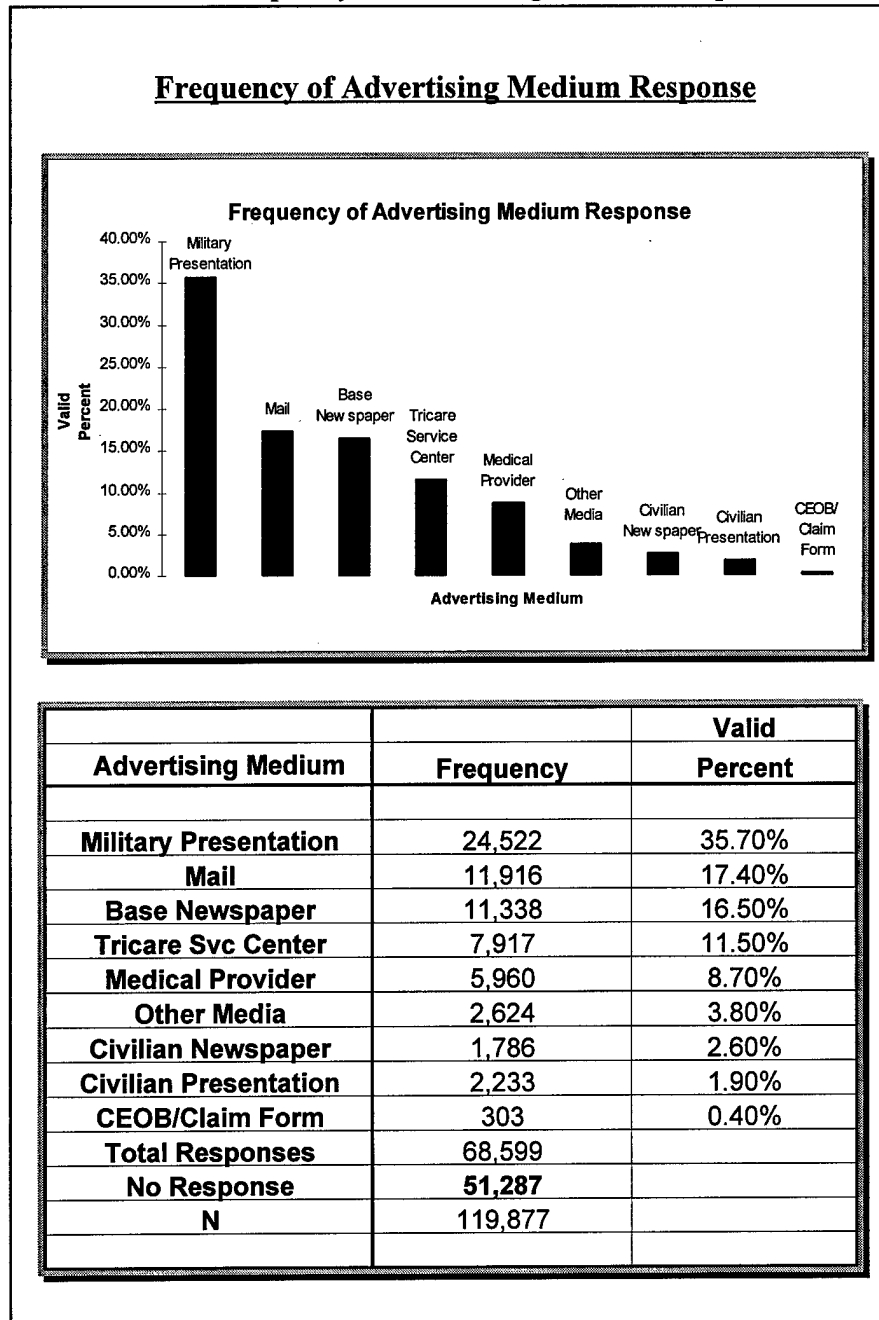


**Frequency of Response to Advertising Medium**

Table 3-13 begins to uncover the performance of the various advertising mediums within the population. This Table identifies the responses to question number 22, "Where did you hear about TRICARE Prime?" Unfortunately, less than half of the population did not respond to this question. Of those who did respond, the Military Presentation was the most popular response and captured over one-third of all responses (N = 24, 522).

Military Presentation was followed by Mail, Base Newspaper, and the TRICARE Service Center in terms of popularity.

Table 3-13. Frequency of Advertising Medium Response.



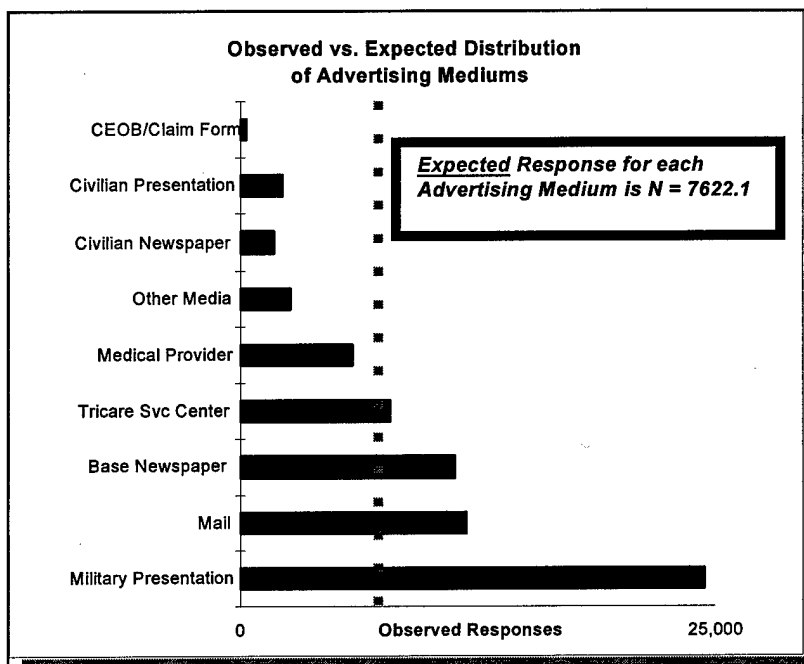
### Distribution of Responses of Promotional Mediums: The First Hypothesis

Statistical analysis of the data for this project begins by determining if the differences between the expected and observed frequency of responses is actually statistically significant. Chi-square analysis revealed the difference between the expected and observed frequency was statistically significant ( $\alpha < 0.001$ ) which allowed the researcher to reject the no differences null hypothesis. Table 3-14 is a modification of Table 3-13 which graphically depicts the differences between the expected and observed distribution of responses to question number 22 of the Prime Enrollment Application. The expected frequency of responses is depicted by a dotted line. The expected frequency was eleven percent for each promotional medium. The observed frequencies of Military Presentation, Mail, Base Newspaper and TRICARE Service Center exceeded the expected frequency of eleven percent for each medium.



Table 3-14. Chi-square Analysis of Expected and Observed Distribution of Promotion Mediums.

**Expected and Observed Distribution  
of Promotional Mediums**



	Observed	Expected
Advertising Medium	Response	Response
Military Presentation	24,522	7622.10
Mail	11,916	7622.10
Base Newspaper	11,338	7622.10
Tricare Svc Center	7,917	7622.10
Medical Provider	5,960	7622.10
Other Media	2,624	7622.10
Civilian Newspaper	1,786	7622.10
Civilian Presentation	2,233	7622.10
CEOB/Claim Form	303	7622.10
Total Responses	68,599	
Chi-Square Statistic	60659.6	
df	8	
Significance p < 0.001	0.000	

### Distribution of Responses of Stratified Demographic Variables Within Each Promotional Medium: The Second Hypothesis

The second hypothesis of this study sought to determine if there are statistically significant differences between an expected distribution of survey responses of the population stratified by demographics and advertising mediums and an observed distribution of the survey responses of the population stratified by each demographic variable and advertising mediums.

A Chi-square based test statistic that measures the strength of association between the variables is called *Cramer's V*. Technically, we would like to find two characteristics with nominal measures of association: (1) when there is no relationship at all, the coefficient should be "zero" and (2) when there is complete dependency, the coefficient should display unity or "one" (Cooper 1995). Cramer's V measures the strength of the relationship between variables. Cramer's V ranges in numeric value from "0" to "+ 1.0" (Cooper Emory 1995).

The Chi-Square statistics and Cramer's V for the relationships between the variables of this study are displayed in Table 3-15 through Table 3-23. Significant findings ( $\alpha < 0.05$ ) are shaded in the tables. The second working hypothesis demonstrated weak relationships between the various advertising mediums and demographic variables. The strongest statistically significant relationship exists between Pay Grade and Base Newspaper (Cramer's V = 0.059;  $\alpha = 0.00$ ).

### The Military Presentation

The differences between the expected and observed frequency of responses for the Military Presentation were statistically significant for the demographic variables of Active Duty, Retired, Pay Grade, Sponsor Enrolled and Army. The results of this analysis are contained in Table 3-15. Pay Grade represented the strongest significant association with the Military Presentation with a Cramer's V statistic of 0.048 ( $\alpha = 0.0$ ).

Table 3-15. The Military Presentation.

<u><b>Military Presentation</b></u>	<b>Chi-Square</b>	<b>Significance</b> $p < 0.05$	<b>Cramer's V</b>	<b>Significance</b> $p < 0.05$
Active Duty	13.809	0.000	0.014	0.000
Retired	13.809	0.000	0.014	0.000
A/D Reserve	0.032	0.859	0.001	0.859
Deceased	0.912	0.340	0.004	0.340
Gender	1.315	0.252	0.004	0.252
Pay Grade	156.379	0.000	0.048	0.000
Sponsor Enrolled	12.128	0.000	0.013	0.000
Other Health Insurance	2.117	0.146	0.006	0.146
Prime Over Other Insurance	0.774	0.379	0.003	0.379
PFTH	3.115	0.078	0.007	0.078
Air Force	2.193	0.139	0.002	0.570
Army	4.168	0.041	0.008	0.041
Coast Guard	0.809	0.368	0.003	0.368
Marines	0.427	0.514	0.002	0.514
Navy	1.965	0.161	0.005	0.161
NOAA	1.996	0.161	0.005	0.161
Public Health Service	0.755	0.385	0.003	0.385
Last Used CHAMPUS - 12 mons	1.128	0.288	0.005	0.288
Last Used CHAMPUS - 2 - 5 Yrs	0.336	0.562	0.003	0.562
Last Used CHAMPUS - Ovr 5 Yrs	1.005	0.316	0.005	0.316
Last Used CHAMPUS - Nly Elig	3.451	0.063	0.010	0.063

## The Mail

The differences between the expected and observed frequency of responses for the Mail were statistically significant for the demographic variables of Pay Grade, Army and Navy. The results of this analysis are contained in Table 3-16. The strongest statistically significant association between the medium and demographic variable was between Mail and Pay Grade which yield a Cramer's V statistic of 0.044 ( $\alpha = 0.0$ ).

Table 3-16. The Mail

<b><u>Mail</u></b>	<b>Chi-Square</b>	<b>Significance <math>p &lt; 0.05</math></b>	<b>Cramer's V</b>	<b>Significance <math>p &lt; 0.05</math></b>
Active Duty	3.445	0.063	0.007	0.630
Retired	3.445	0.063	0.007	0.630
A/D Reserve	0.232	0.630	0.002	0.630
Deceased	2.120	0.145	0.006	0.145
Gender	0.012	0.911	0.000	0.911
Pay Grade	133.803	0.000	0.044	0.000
Sponsor Enrolled	3.400	0.065	0.007	0.065
Other Health Insurance	0.692	0.405	0.003	0.405
Prime Over Other Insurance	0.578	0.447	0.003	0.447
PFTH	2.888	0.089	0.006	0.089
Air Force	0.104	0.747	0.001	0.747
Army	8.056	0.005	0.011	0.005
Coast Guard	1.765	0.184	0.005	0.184
Marines	0.867	0.352	0.004	0.352
Navy	7.168	0.007	0.010	0.007
NOAA	0.306	0.580	0.002	0.580
Public Health Service	1.665	0.197	0.005	0.197
Last Used CHAMPUS - 12 mons	0.185	0.667	0.002	0.667
Last Used CHAMPUS - 2 - 5 Yrs	0.006	0.939	0.000	0.939
Last Used CHAMPUS - Ovr 5 Yrs	0.023	0.879	0.001	0.879
Last Used CHAMPUS - Nly Elig	0.842	0.359	0.005	0.359

### The Base Newspaper

The differences between the expected and observed frequency of responses for the Base Newspaper were statistically significant for the demographic variables of Pay Grade, Army and Coast Guard. The results of this analysis are contained in Table 3-17. The strongest statistically significant association between the medium and demographic variable exists between Pay Grade and Base Newspaper with a Cramer's V statistic of 0.059 ( $\alpha = 0.0$ ).

Table 3-17. The Base Newspaper

<u>Base Newspaper</u>	Chi-Square	Significance	Cramer's V	Significance
		$p < 0.05$		$p < 0.05$
Active Duty	1.219	0.270	0.004	0.270
Retired	1.219	0.270	0.004	0.270
A/D Reserve	0.800	0.371	0.003	0.371
Deceased	1.529	0.216	0.005	0.216
Gender	0.335	0.562	0.002	0.562
Pay Grade	238.117	0.000	0.059	0.000
Sponsor Enrolled	0.838	0.360	0.006	0.094
Other Health Insurance	3.662	0.056	0.007	0.056
Prime Over Other Insurance	0.838	0.360	0.004	0.360
PFTH	2.705	0.100	0.006	0.100
Air Force	1.781	0.182	0.005	0.182
Army	5.088	0.024	0.009	0.024
Coast Guard	5.354	0.021	0.009	0.021
Marines	0.037	0.847	0.001	0.847
Navy	0.238	0.626	0.002	0.626
NOAA	1.023	0.312	0.004	0.312
Public Health Service	0.677	0.411	0.003	0.411
Last Used CHAMPUS - 12 mons	0.083	0.773	0.001	0.773
Last Used CHAMPUS - 2 - 5 Yrs	1.163	0.281	0.006	0.281
Last Used CHAMPUS - Ovr 5 Yrs	0.734	0.391	0.004	0.391
Last Used CHAMPUS - Nly Elig	0.022	0.883	0.001	0.883

### The TRICARE Service Center

The differences between the expected and observed frequency of responses for the TRICARE Service Center were statistically significant for the independent variables of Pay Grade, Coast Guard, and Navy. The results of this analysis are contained in Table 3-18. The highest statistically significant association between the medium and demographic variable exists between TRICARE Service Center and Pay Grade with a Cramer's V statistic of 0.040 ( $\alpha = 0.0$ ).

Table 3-18. The TRICARE Service Center

<b><u>TRICARE Service Center</u></b>	<b>Chi-Square</b>	<b>Significance <math>p &lt; 0.05</math></b>	<b>Cramer's V</b>	<b>Significance <math>p &lt; 0.05</math></b>
Active Duty	0.023	0.879	0.001	0.879
Retired	0.023	0.879	0.001	0.879
A/D Reserve	0.348	0.555	0.002	0.555
Deceased	0.005	0.943	0.000	0.943
Gender	0.125	0.723	0.001	0.723
Pay Grade	107.884	0.000	0.040	0.000
Sponsor Enrolled	0.335	0.563	0.001	0.879
Other Health Insurance	2.195	0.138	0.006	0.138
Prime Over Other Insurance	0.071	0.790	0.001	0.790
PFTH	0.006	0.936	0.000	0.936
Air Force	1.062	0.303	0.004	0.303
Army	0.788	0.378	0.003	0.378
Coast Guard	5.402	0.020	0.009	0.020
Marines	1.290	0.256	0.004	0.256
Navy	8.361	0.004	0.011	0.004
NOAA	0.182	0.670	0.002	0.670
Public Health Service	0.425	0.515	0.002	0.515
Last Used CHAMPUS - 12 mons	1.520	0.218	0.006	0.218
Last Used CHAMPUS - 2 - 5 Yrs	0.209	0.647	0.002	0.647
Last Used CHAMPUS - Ovr 5 Yrs	3.324	0.068	0.009	0.068
Last Used CHAMPUS - Nly Elig	0.231	0.631	0.002	0.631

### Medical Provider

The differences between the expected and observed frequency of responses for the Medical Provider were statistically significant for the independent variables of Pay Grade, Active Duty Reserve, Coast Guard and NOAA. The results of this analysis are contained in Table 3-19. The highest statistically significant association between the medium and a demographic variable exists between Medical Provider and Pay Grade with a Cramer's V statistic of 0.040 ( $\alpha = 0.0$ ).

Table 3-19. The Medical Provider.

<u>Medical Provider</u>	Chi-Square	Significance	Cramer's V	Significance
		$p < 0.05$		$p < 0.05$
Active Duty	0.556	0.456	0.003	0.456
Retired	0.556	0.456	0.003	0.456
A/D Reserve	5.215	0.022	0.009	0.022
Deceased	0.018	0.893	0.001	0.893
Gender	0.001	0.970	0.003	0.477
Pay Grade	110.395	0.000	0.040	0.000
Sponsor Enrolled	1.322	0.250	0.004	0.250
Other Health Insurance	0.051	0.821	0.001	0.821
Prime Over Other Insurance	0.751	0.386	0.003	0.386
PFTH	0.547	0.459	0.003	0.459
Air Force	2.193	0.139	0.006	0.139
Army	2.436	0.119	0.006	0.119
Coast Guard	4.725	0.030	0.008	0.030
Marines	2.314	0.128	0.006	0.128
Navy	0.524	0.469	0.003	0.469
NOAA	4.939	0.026	0.008	0.026
Public Health Service	0.190	0.663	0.002	0.663
Last Used CHAMPUS - 12 mons	0.598	0.439	0.004	0.439
Last Used CHAMPUS - 2 - 5 Yrs	0.053	0.818	0.001	0.818
Last Used CHAMPUS - Ovr 5 Yrs	2.622	0.105	0.008	0.105
Last Used CHAMPUS - Nly Elig	0.480	0.488	0.004	0.488

### Other Media

The differences between the expected and observed frequency of responses for Other Media were statistically significant for the independent variables of Pay Grade, Air Force, and Last Used CHAMPUS (Never - Newly Eligible). The results of this analysis are contained in Table 3-20. The highest statistically significant association between the dependent and independent variable exists between Other Media and Pay Grade with a Cramer's V statistic of 0.017 ( $\alpha = 0.0$ ).



Table 3-20. Other Media

<b>Other Media</b>	<b>Chi-Square</b>	<b>Significance</b>	<b>Cramer's V</b>	<b>Significance</b>
		<b>p &lt; 0.05</b>		<b>p &lt; 0.05</b>
Active Duty	0.185	0.667	0.002	0.667
Retired	0.185	0.667	0.002	0.667
A/D Reserve	0.004	0.950	0.000	0.950
Deceased	0.005	0.944	0.003	0.944
Gender	0.839	0.360	0.003	0.360
Pay Grade	20.851	0.000	0.017	0.000
Sponsor Enrolled	0.839	0.360	0.003	0.360
Other Health Insurance	1.002	0.317	0.004	0.317
Prime Over Other Insurance	0.056	0.813	0.001	0.813
PFTH	0.223	0.637	0.002	0.637
Air Force	4.092	0.043	0.008	0.043
Army	0.546	0.460	0.003	0.460
Coast Guard	0.002	0.961	0.000	0.961
Marines	0.251	0.616	0.002	0.616
Navy	1.727	0.189	0.005	0.189
NOAA	0.915	0.339	0.004	0.339
Public Health Service	2.887	0.089	0.006	0.089
Last Used CHAMPUS - 12 mons	1.068	0.301	0.005	0.301
Last Used CHAMPUS - 2 - 5 Yrs	0.298	0.585	0.003	0.585
Last Used CHAMPUS - Ovr 5 Yrs	0.348	0.555	0.003	0.555
Last Used CHAMPUS - Nly Elig	8.445	0.004	0.015	0.004

### The Civilian Newspaper

The differences between the expected and observed frequency of responses for the Civilian Newspaper were statistically significant for the independent variables of Active Duty, Retired, Deceased, Pay Grade, and Program For the Handicapped (PFTH). The results of this analysis are contained in Table 3-21. The highest statistically

significant association between the dependent and independent variable exists between Civilian Newspaper and Pay Grade with a Cramer's V statistic of 0.052 ( $\alpha = 0.0$ ).

Table 3-21. Civilian Newspaper

<b>Civilian Newspaper</b>	<b>Chi-Square</b>	<b>Significance</b>	<b>Cramer's V</b>	<b>Significance</b>
		<b>p &lt; 0.05</b>		<b>p &lt; 0.05</b>
Active Duty	6.454	0.011	0.010	0.011
Retired	6.454	0.011	0.010	0.011
A/D Reserve	0.296	0.586	0.002	0.586
Deceased	5.229	0.022	0.009	0.022
Gender	0.233	0.629	0.002	0.629
Pay Grade	183.770	0.000	0.052	0.000
Sponsor Enrolled	3.148	0.076	0.007	0.076
Other Health Insurance	0.852	0.356	0.004	0.356
Prime Over Other Insurance	0.611	0.435	0.003	0.435
PFTH	12.673	0.000	0.014	0.000
Air Force	3.173	0.075	0.007	0.075
Army	1.774	0.183	0.005	0.183
Coast Guard	0.813	0.367	0.003	0.367
Marines	0.669	0.413	0.003	0.413
Navy	0.056	0.813	0.001	0.813
NOAA	0.615	0.433	0.003	0.433
Public Health Service	1.462	0.227	0.005	0.227
Last Used CHAMPUS - 12 mons	0.195	0.659	0.002	0.659
Last Used CHAMPUS - 2 - 5 Yrs	0.878	0.349	0.005	0.349
Last Used CHAMPUS - Ovr 5 Yrs	2.381	0.123	0.008	0.123
Last Used CHAMPUS - Nly Elig	0.901	0.343	0.005	0.343

### The Civilian Presentation

The differences between the expected and observed frequency of responses for Civilian Presentation were statistically significant for the independent variables of Active Duty, Retired, Pay Grade, Sponsor Enrolled, Selected Prime Over Other Insurance, Air

Force, and NOAA. The results of this analysis are contained in Table 3-22. The highest statistically significant association between the medium and the demographic variable yield the same Cramer's V statistic of 0.015 ( $\alpha = 0.0$ ). These demographic variables are: Active Duty, Retired, Pay Grade and NOAA.

Table 3-22. The Civilian Presentation.

<b><u>Civilian Presentation</u></b>	<b>Chi-Square</b>	<b>Significance</b>	<b>Cramer's V</b>	<b>Significance</b>
		<b>p &lt; 0.05</b>		<b>p &lt; 0.05</b>
Active Duty	16.262	0.000	0.015	0.000
Retired	16.262	0.000	0.015	0.000
A/D Reserve	1.154	0.283	0.004	0.283
Deceased	0.050	0.824	0.001	0.824
Gender	0.001	0.970	0.000	0.970
Pay Grade	15.289	0.000	0.015	0.000
Sponsor Enrolled	6.941	0.008	0.010	0.008
Other Health Insurance	0.525	0.469	0.003	0.469
Prime Over Other Insurance	6.564	0.010	0.010	0.010
PFTH	2.702	0.100	0.006	0.100
Air Force	6.288	0.012	0.010	0.012
Army	1.979	0.159	0.005	0.159
Coast Guard	1.520	0.218	0.005	0.218
Marines	0.919	0.338	0.004	0.338
Navy	0.053	0.818	0.001	0.818
NOAA	14.599	0.000	0.015	0.000
Public Health Service	0.339	0.560	0.002	0.560
Last Used CHAMPUS - 12 mons	0.020	0.887	0.001	0.887
Last Used CHAMPUS - 2 - 5 Yrs	0.289	0.591	0.003	0.591
Last Used CHAMPUS - Ovr 5 Yrs	1.673	0.196	0.007	0.196
Last Used CHAMPUS - Nly Elig	0.597	0.440	0.004	0.440

### The CHAMPUS Explanation of Benefits (CEOB) Claim Form

The CEOB Claim Form is a statement about the action taken on CHAMPUS claims which is mailed to beneficiaries when payments are made to providers by the CHAMPUS Claims Office. This document is not a bill, but a report to the beneficiary that the claim has been processed which provides information about what was paid to the provider, the cost share of the beneficiary, and the amount applied against a Catastrophic Cap. Since this form is mailed to beneficiaries who utilize CHAMPUS, it serves as a communication channel to provide advertising information to the beneficiary. The differences between the expected and observed frequency of responses for the CEOB Claim Form were statistically significant for the demographic variables of Pay Grade, Prime Over Other Insurance, PFTH, and the Marines. The results of this analysis are contained in Table 3-23. The highest statistically significant association between the dependent and independent variable exists between CEOB / Claim Form and Selected Prime Over Other Insurance with a Cramer's V statistic of 0.015 ( $\alpha = 0.0$ ).

Table 3-23. The CEOB / Claim Form

<b>CEOB / Claim Form</b>	<b>Chi-Square</b>	<b>Significance</b>	<b>Cramer's V</b>	<b>Significance</b>
		<b>p &lt; 0.05</b>		<b>p &lt; 0.05</b>
<b>Active Duty</b>	2.825	0.093	0.006	0.093
<b>Retired</b>	2.825	0.093	0.006	0.093
<b>A/D Reserve</b>	3.050	0.081	0.007	0.081
<b>Deceased</b>	0.257	0.612	0.002	0.612
<b>Gender</b>	0.378	0.538	0.002	0.538
<b>Pay Grade</b>	7.642	0.006	0.011	0.006
<b>Sponsor Enrolled</b>	1.712	0.191	0.006	0.093
<b>Other Health Insurance</b>	2.387	0.122	0.006	0.122
<b>Prime Over Other Insurance</b>	15.067	0.000	0.015	0.000
<b>PFTH</b>	11.591	0.001	0.013	0.001
<b>Air Force</b>	0.220	0.639	0.002	0.639
<b>Army</b>	2.713	0.100	0.006	0.100
<b>Coast Guard</b>	0.196	0.658	0.002	0.658
<b>Marines</b>	3.974	0.046	0.008	0.046
<b>Navy</b>	0.631	0.427	0.003	0.427
<b>NOAA</b>	0.102	0.749	0.001	0.749
<b>Public Health Service</b>	0.529	0.467	0.003	0.467
<b>Last Used CHAMPUS - 12 mons</b>	1.640	0.200	0.007	0.200
<b>Last Used CHAMPUS - 2 - 5 Yrs</b>	0.025	0.874	0.001	0.874
<b>Last Used CHAMPUS - Ovr 5 Yrs</b>	2.994	0.084	0.009	0.084
<b>Last Used CHAMPUS - Nly Elig</b>	0.007	0.935	0.000	0.935

## CHAPTER 4

### DISCUSSION

According to Major General George Anderson, Deputy Assistant Secretary of Defense for Health Services Operations and Readiness, "We have a mountain of information about our providers, but we don't have enough information about the people we serve" (Hawkins 1997). Major General Anderson further stated that "Although DoD is defining TRICARE performance measures, it is not collecting key data on either beneficiary access to care or *enrollment*" (Hawkins 1997).

Review of the data analyzed and the statistical tests that were performed indicate the value of this study is its ability to develop a better understanding about who our enrolled customers are as well as the performance of the various advertising mediums during the enrollment period within TRICARE Region 11. Responses to the advertising medium question indicated that some advertising mediums were significantly more prevalent than others. Although an attempt was made to associate advertising mediums with various demographic characteristics of the market, statistical testing failed to establish exceedingly strong relationships between advertising mediums and the various demographics of those who enrolled in TRICARE Prime within Region 11 during the period covered by the study.

## Our Customers

One of the objectives implied in the statement of the problems or questions in this study sought to identify who are the customers who enrolled in TRICARE Prime in Region 11. Table 4-1 answers this question by providing a summary of the demographic characteristics of the sponsors who enrolled in TRICARE Prime during the enrollment period.

Table 4-1. Demographic Characteristics of Sponsors of TRICARE Prime Enrollees in TRICARE Region 11.

Demographic	Characteristic						
Sponsor Gender	Male 37.70%	Female 62.30%					
Active Duty Sponsor	Yes 74%	No 26%					
Sponsor Pay Grade	E4 & Below 16.40%	E5 & Above 83.60%					
Branch of Service	Army 40.70%	Navy 34.30%	Air Force 20.60%	Coast Guard 2.30%	Marines 1.90%	NOAA 0.16%	Public Hlth 0.20%
Active Duty Reserve	Yes 1.60%	No 98.40%					
Sponsor Deceased	Yes 0.90%	No 99.10%					
Sponsor Retired	Yes 26%	No 74%					
Retired Sponsor Enrolling	Yes 84%	No 16%					
Other Healthcare Coverage	Yes 3.39%	No 96.61%					
Enrolled in Program for the Handicapped	Yes 1%	No 99%					
Selected Prime over Other Insurance	Yes 98.80%	No 1.20%					
Last Used CHAMPUS	1 Year 53.10%	2 - 5 Yrs 24.30%	> 5 Yrs 11.10%	Never, Newly Eligible 11.60%			

Slightly more than 62% (N = 74,627) of the respondents indicated the Sponsor's gender was Female, while less than 38% (N = 45,249) indicated the Sponsor's gender was Male. This represents an interesting observation in the objective to identify characteristics of the Prime market in Region 11. According to the Defense Equal Opportunity Management Institute (DEOMI), females on active duty represented only 12.6% (N = 194, 534) of the total active duty population (N = 1,540,865) at the end of June, 1995 (DEOMI, 1996). This observation gives intuitive confidence in the notion that segmentation based upon gender has been shown to be a successful strategy. Women comprise a major segment of the healthcare audience because of their prominence in making healthcare decisions. The weakness of this observation is the fact that the gender of the person completing the application form was not known -- this demographic was not measured through annotation on the Enrollment Application. Given that the majority of the Sponsors who enrolled were female, decisions regarding the resourcing of women's healthcare issues might require some further investigation.

Seventy-four percent of the sponsors who enrolled in TRICARE Prime during the period of this study were active duty personnel. This finding is consistent with evidence indicating that closed panel HMOs are most likely to attract enrollees who do not have established patient-physician relationships, and who tend to be members of younger families with a larger number of smaller children. These characteristics are often found in areas with high population mobility. Individuals and families new to a community have not had the opportunity to establish a private patient-physician relationship and they



tend to be younger. The closed panel HMO offers them assured access without having to search for sources of routine care in a new and unfamiliar community. Having the option available through the workplace, and having the ability to gain at least some information about the delivery characteristics of the HMO, reduces the burden of searching for sources of care (Berki 1980).

### Advertising Mediums

The responses of Region 11's TRICARE Prime enrollees to the question about how they heard about TRICARE Prime indicate the Military Presentation, Mail, Base Newspaper, and TRICARE Service Center were the most popular and exceeded the expected frequency of occurrences. The CEOB/Claim Form, Civilian Presentation, Civilian Newspaper, Other Media, and Medical Provider were the least popular and were below the expected frequency. It is not clear why some advertising mediums were more popular than others. Perhaps these responses are more a function of how the various Tri-service organizations throughout Region 11 responsible for advertising during the enrollment period relied on some mediums more than others. Taken in the aggregate and on a broad perspective, a potential benefit in understanding about what worked and what did not work is the ability to prioritize and target resources against those advertising mediums that have been demonstrated as most effective. Conversely, the value those mediums that fell below an expected frequency of responses from the population should be further evaluated and possibly even abandoned. However, popularity of the response

to Question 22 of the Enrollment Application does not tell the whole story. Further clarity is obtained through statistical analysis which investigated relationships through measures of association between demographic variables and advertising medium.

Table 4-2, Significant Associations between Advertising Mediums and Demographic Variables, suggests a possible explanation in describing what happened during the enrollment period. Although the relationships between these variables are not exceptionally strong, the Table assists in identifying which advertising mediums and demographic variables elicit a statistically significant relationship. Despite the fact that the Civilian Presentation was not among the most popular responses when looking at the aggregate group of responses, it demonstrated a statistically significant relationship with seven demographic variables (Active Duty, Retired, Pay Grade, Sponsor Enrolled, Program for the Handicapped, Air Force, and NOAA). Although the observed frequencies of the Civilian Presentation fell short of the expected frequencies, this channel was more selective in reaching more demographic segments of the market than all other individual mediums. Civilian Newspaper and Military Presentation were related to five demographic characteristics. Medical Provider and CEOB Claim Form were related to four demographic characteristics. Mail, Base Newspaper, TRICARE Service Center, and Other Media were related to three demographic characteristics.

Given that the observed response of the TRICARE Service Center was marginally above the expected response to how people heard about TRICARE Prime and that only three demographic variables were related to the TRICARE Service Center, there may be

justification to conduct further study into ways to make this advertising medium more prominent among the enrolled population.

Table 4-2. Significant Associations between Advertising Mediums and Demographic Variables and Channels Reached

				Advertising Medium					
	Military		Base	Tricare	Medical	Other	Civilian	Civilian	CEOB/
	Presentation	Mail	Newspaper	Svc Ctr	Provider	Media	Newspaper	Presentation	Claim Form
Demographic Variables									
Active Duty	X						X	X	
Retired	X						X	X	
A/D Reserve					X				
Deceased							X		
Gender									
Pay Grade	X	X	X	X	X	X	X	X	X
Sponsor Enrolled	X							X	
Other Health Insurance									
Prime Over Other Insurance								X	X
PFTH							X		X
Air Force						X		X	
Army	X	X	X						
Coast Guard			X	X	X				
Marines									X
Navy		X		X					
NOAA					X			X	
Public Health Service									
Last Used CHAMPUS - 12 mons									
Last Used CHAMPUS - 2 - 5 Yrs									
Last Used CHAMPUS - Ovr 5 Yrs									
Last Used CHAMPUS - Nly Elig						X			
Channels Reached	5	3	3	3	4	3	5	7	4

Pay Grade had a statistically significant relationship to all advertising mediums. Gender, Other Health Insurance, Public Health Service, and four of the five categories of Last Used CHAMPUS demonstrated no statistically significant relationship to the various advertising mediums.

The relationships between demographic variables and advertising mediums appear to be distinctly different among the various Branches of Service. The Military Presentation, Mail, and Base Newspaper were associated with the Army. The Base Newspaper, TRICARE Service Center, and Medical Provider were associated with the Coast Guard. The Mail and TRICARE Service Center were associated with Navy. Medical Provider and Civilian Presentation were associated with the National Oceanic and Atmospheric Administration. Again, these statistically significant relationships may be a function of the prominent methods each of the Services used to advertise the TRICARE Prime Program. Of concern is the observation that none of the Advertising Mediums is associated with members of the Public Health Service. Further study must be conducted to determine the best method for communicating the TRICARE Prime message to members of the Public Health Service.

Enrollees whose sponsor was a member of the Active Duty Reserve or whose sponsor was deceased converged upon only one medium. The Active Duty Reserve were significantly associated with Medical Provider. Most Active Duty Reserve personnel are assigned to locations outside the immediate catchment area of major military healthcare facilities. Since most Active Duty Reserve personnel converge upon their Medical Provider for information about TRICARE Prime, it is essential that attention be given to ensuring that network Providers who serve these individuals in Geographically Separated Unites (GSUs) obtain accurate, timely, and user friendly information to keep this group of beneficiaries sufficiently informed about their healthcare benefit.

Those whose sponsor was deceased were associated with the Civilian Newspaper. Future efforts to target these categories of beneficiaries could capitalize upon reaching them through the Civilian Newspaper channel.

A category of advertising that is not well understood is the medium of "Other Media." A former U.S. Surgeon General, Dr. C. Everett Koop, provides some vision for where we may need to go in this area. "Information technology -- television, videos, print media and the Internet -- can inform and empower patients by providing them with the information and vocabulary they need to work along with their physicians in taking charge of their own health" (Koop 1996). The expected frequency of Other Media was below the observed frequency. However, the demographics of Pay Grade, Air Force, and Never Used CHAMPUS Newly Eligible were shown to have a statistically significant relationship with Other Media. This study raises more questions than answers within this advertising. Perhaps the Internet could be one of the answers because it serves as a low cost opportunity available to the Region 11 to provide information about TRICARE Prime to various segments of the market.

#### Limitations of the Study

The strength of this study is its ability to report *what* happened during enrollment in TRICARE Prime in Region 11 from March 1, 1995 until August 31, 1996. The weakness of this study is its design which made it impossible to understand *why* these

events occurred. While there was some association between advertising mediums and demographic variables, the strength of these relationships were very weak.

It is not known how well each of the various advertising mediums were utilized by the various marketing organizations within Region 11 during the enrollment period. Utilizing the data contained in Table 4-2, it might be assumed that the Army placed a greater emphasis upon the Military Presentation, Mail, and the Base Newspaper. Perhaps the Navy placed a greater emphasis upon Mail and the TRICARE Service Center. The post hoc experimental design of this study coupled with the inability to assign members of the population to treatment and control groups requires the reader to exercise care in drawing any causal explanations from this study.

Another concern worth noting is the fact that while the study reveals a great deal of information about *sponsors* (e.g. Branch of Service, Active Duty, Retired, etc.) , the Enrollment Application does not reveal enough information about the person completing the Enrollment Form. The person completing the form does not necessarily have to be the same person as the sponsor. Question 22 of the Enrollment Form asks "How did you hear about TRICARE Prime?". It is feasible that the sponsor heard about Prime in a different manner than the person who completed the Enrollment Application.

The method for coding the Enrollment Application if more than one response was checked is not known. It may be feasible for a person completing an Enrollment Application to indicate more than one advertising medium. Over forty-three percent (N

= 51,287) of the total number of subjects ( $N = 119,877$ ) did not respond to question 22 of the Enrollment Application. The reason for this high response rate is not known.

## **CHAPTER 5**

### **CONCLUSIONS AND RECOMMENDATIONS**

Analysis of the data in this study provides insights and trends about the demographics of those who enrolled in the program as well as the performance of the various advertising mediums used to promote TRICARE Prime. Some advertising mediums have been shown to be more prominent within the population than others. Association measures between demographic variables and advertising were shown to demonstrate some significant statistical relationship. However, the association between demographics and advertising medium were found to be extremely low.

While it is difficult to establish any cause and effect relationships between advertising mediums and demographic variables, a retrospective analysis of what actually happened provides valuable historical information about the performance of the various advertising mediums employed during the enrollment period.

Future studies in this area should attempt to improve upon metrics for measuring the effectiveness of the various advertising mediums and an experimental design which more clearly establishes cause and effect relationships between demographic variables and advertising mediums. Clearly, some improvements are needed in the data collection process. The high nonresponse rate to question number 22 of the Prime Enrollment Application (the advertising question) indicates a need to more carefully review Enrollment Applications, if possible, by those responsible for collection of the form prior



to their submission for processing at the corporate headquarters of the Primary Managed Care Contractor. The Prime Enrollment Application form should also be improved to allow collection of more accurate information about the individual completing the form. This form should also be more carefully screened at the TRICARE Service Center to ensure the non-response rate is minimized.

Geographic and psychographic segmentation bases were not examined in this study, however there may be justification to pursuit of a better understanding of these bases. An emerging policy within DoD Health Affairs seeks to further streamline the delivery of high cost Diagnostic Related Groups (DRGs) by consolidating their provision within the various MHSS Medical Centers (MEDCENs) located within the United States. An initiative to identify Specialized Treatment Services (STS) seeks to conduct an analysis of redundant high cost DRGs performed at MEDCENs. Perhaps consideration should be given toward identifying and including any unique geographic or psychographic factors which may affect efficient delivery of these services to beneficiaries of the MHSS at the various MEDCENs prior to implementation of any final policy on this issue.

Better understanding about advertising to beneficiaries has applicability for programs which advocate health promotion and prevention. Increasingly, physicians and other healthcare providers are steering their patients during each encounter about the importance of personal responsibility for good health (ACHE 1993). In many cases, hospitals have created new forums for health education and outlets for healthy lifestyle

development (ACHE 1993). Utilizing the various channels of advertising effectively serves as a means for creating a positive perception among beneficiaries about the healthcare organization as a caring and involved institution.

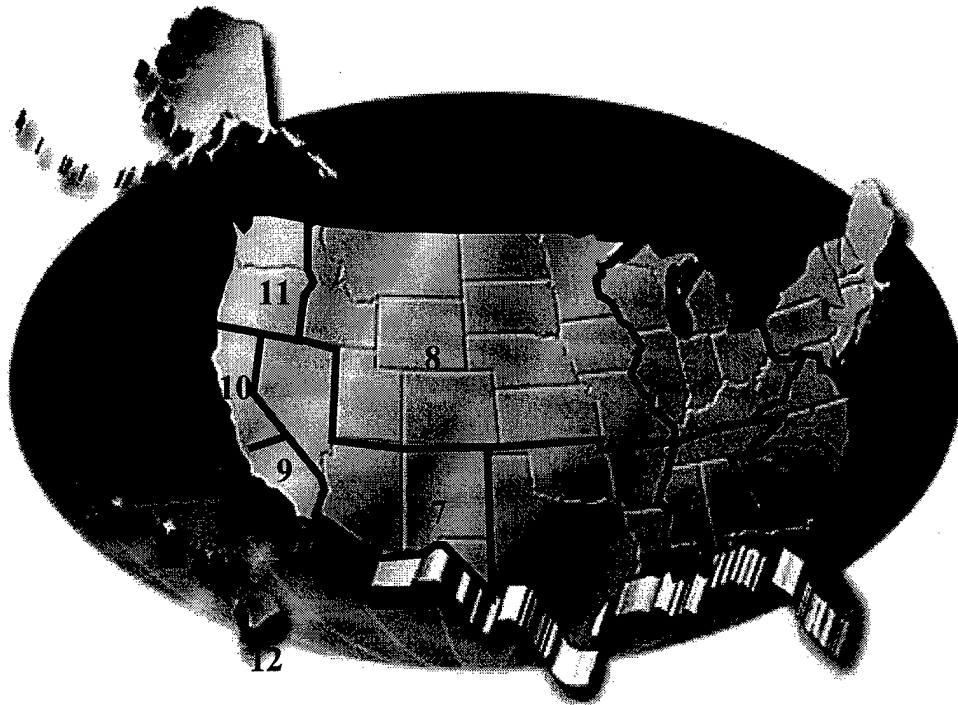
The DoD Health Affairs Marketing Office Action Plan identifies a need for immediate proactive marketing of TRICARE to ensure the future continued success of military medicine. This retrospective study utilized existing data contained in a data base assists in establishing a baseline of information from which to build further expertise in understanding the characteristics of beneficiaries who enroll in TRICARE Prime. This study also serves to improve understanding about the various methods the Military Health Services System employs to advertise its programs to meet the healthcare needs of its beneficiary population.

Senior DoD leadership expressed concern that the MHSS is not doing enough to gather information about beneficiaries of the TRICARE program. As the Congress and DoD plan for the future, decisions about the appropriate size of the MHSS will be of paramount importance (GAO 1995). DoD's ability to use TRICARE to adequately augment a downsized medical care system and its ability to successfully address the operational challenges to TRICARE are key to the program's future utility as the principal means by which DoD will provide care to its beneficiaries. Efforts to improve understanding of those served by TRICARE will serve to provide the MHSS's corporate leadership with timely and accurate market information. Failure to address shortfalls in

TRICARE marketing arena could shift the MHSS toward provision of the healthcare benefit to other alternatives such as the Federal Employees Health Benefits Program.

## APPENDIX A

### GEOGRAPHICAL LOCATIONS OF TRICARE REGIONS



The DoD Military Health Services System is divided into twelve separate regions which are responsible for the delivery of healthcare to eligible beneficiaries who reside within the region's area of responsibility. The responses of the TRICARE Prime Enrollment Applications of beneficiaries who reside in Region 11 were analyzed in this study. Region 11 comprises the geographic area of Washington State, Oregon, and Northern Idaho.

# APPENDIX B

## TRICARE PRIME ENROLLMENT APPLICATION



### PRIME ENROLLMENT APPLICATION



<b>SPONSOR INFORMATION</b>	
1) SPONSOR NAME (LAST, FIRST, MI)	2) SPONSOR SOCIAL SECURITY NUMBER
3) STREET, APT. NO., CITY, STATE, ZIP	
4) SEX (M/F), 5) BIRTHDATE (MO, DAY, YR), 6) PHONE (HOME/WORK), 7) IS SPONSOR ACTIVE DUTY? (YES/NO)	
8) SPONSOR RANK, 9) SPONSOR PAY GRADE, 10) UNIT OF ASSIGNMENT, 11) BRANCH OF SERVICE (USAF, USPHS, NOAA, USMC, USN, USARV, USARV, USARV), 12) IS SPONSOR DECEASED? (YES/NO)	
13) IS SPONSOR AN ACTIVE-DUTY RESERVIST? (YES/NO), 14) IF YES, INDICATE SEPARATION DATE, 15) IS SPONSOR RETIRED? (YES/NO), 16) IF YES, INDICATE SEPARATION DATE, 17) RETIRED SPONSOR'S PRIMARY CARE MANAGER (PCMC), 18) NAME / CLINIC SITE	
19) LIST PRIMARY CARE MANAGER'S COMPLETE ADDRESS, 20) IS THIS THE CURRENT PROVIDER? (YES/NO)	
<b>17) FAMILY MEMBER INFORMATION IF ENROLLING MORE THAN TWO, USE THE REVERSE SIDE OF THE INSTRUCTION SHEET</b>	
NAME (LAST, FIRST, MI), RELATIONSHIP TO SPONSOR, SEX (MALE/FEMALE), BIRTHDATE (MO, DAY, YR), ADDRESS (CITY, STATE, ZIP), SOCIAL SECURITY NUMBER, PRIMARY CARE MANAGER (PCMC) MUST BE COMPLETED, NAME / CLINIC SITE, IS THIS THE CURRENT PROVIDER? (YES/NO)	
<b>DO YOU OR YOUR FAMILY MEMBERS REQUESTING ENROLLMENT HAVE OTHER HEALTH COVERAGE, INCLUDING MEDICARE?</b>	
18) IF YES, COMPLETE THIS SECTION: WHO IS COVERED? (SPONSOR, SPOUSE, FAMILY MEMBER), INSURED'S NAME, FULL COVERAGE, SUPPLEMENTAL COVERAGE, ID NO., GROUP NO., NAME OF EMPLOYER/OTHER SOURCE, CARRIER'S NAME & ADDRESS	
19) DID YOU OR ANY FAMILY MEMBERS CHOOSE TRICARE PRIME INSTEAD OF COVERAGE THROUGH ANOTHER SOURCE? (YES/NO), 20) ARE YOU OR YOUR FAMILY MEMBERS REQUESTING ENROLLMENT PARTICIPATING IN THE PROGRAM FOR THE HANDICAPPED (PH)? (YES/NO), IF YES, PLEASE LIST PARTICIPANT(S)	
21) WHEN WAS THE LAST TIME YOU OR ELIGIBLE FAMILY MEMBERS USED STANDARD CHAMPUS? (PAST 12 MONTHS, 2-5 YEARS, OVER 5 YEARS, NEVER, NEVER NEWLY ELIGIBLE, NEVER ALWAYS USE MILITARY FACILITIES)	
22) WHERE DID YOU HEAR ABOUT TRICARE PRIME? (BASE, NEWSPAPER, CIVILIAN, OTHER, MAIL, TRICARE SERVICE CENTER, CIVILIAN PRESENTATION, MEDICAL PROVIDER, PEO/CLAM FORM, MILITARY PRESENTATION, MTF, WHICH MTF?)	
<b>23) PLEASE INITIAL EACH ITEM BELOW TO ACKNOWLEDGE YOUR AGREEMENT SIGN AND DATE ON THE SIGNATURE LINE BELOW.</b>	
<p>I have read the information provided to me in the TRICARE Prime and Extra brochure and hereby apply for enrollment. I understand that entitlement to CHAMPUS benefits will be confirmed through the Defense Enrollment Eligibility Reporting System (DEERS).</p> <p>I understand that a Primary Care Manager (PCM), either a civilian network provider or clinic site, or a Military Treatment Facility (MTF) clinic site, must be assigned; selected as a PCM for all parties being enrolled.</p> <p>I understand that, except for emergencies, all TRICARE Prime services must be coordinated through the PCM. If care is obtained that has not been coordinated by the PCM and authorized by the Health Care Finder, I understand that I will be responsible for payment of charges in accordance with the provisions of the Point-of-Service (POS) option as described in the TRICARE Program Benefits and Features brochure, Member Handbook, and CHAMPUS regulations.</p> <p>I understand that I, and eligible enrolled family members, will be enrolled in TRICARE Prime for twelve consecutive months and that if an enrolled member moves to an area where TRICARE Prime is not available, they must be disenrolled from the program and any enrollment fee will not be refunded.</p> <p>I authorize Foundation Health Federal Services and/or its provider network subcontractors to examine, disclose and copy records of any physician, hospital or provider when necessary for proper payment of benefits for all enrollees listed on this application and/or attachment.</p> <p>I understand that Foundation Health Federal Services reserves the right to require beneficiary prepayment of prescription drug costs and submit a claim for determination of payment of benefits.</p> <p>I hereby certify that the information provided on this document is true and complete. I agree to abide by the provisions of membership in TRICARE Prime.</p>	
<b>IF APPLICABLE, ATTACH A CHECK OR MONEY ORDER FOR THE ENROLLMENT FEE, PAYABLE TO FHFS - TRICARE.</b>	
<b>PAYMENT METHOD:</b>	
<p>1. <input type="checkbox"/> Check or money order (made payable to FHFS - TRICARE)</p> <p>2. <input type="checkbox"/> Quarterly payments: (If this box is checked, please fill out Quarterly Payment Application Section on reverse side of Prime Enrollment Instructions.)</p> <p>3. <input type="checkbox"/> Annual payment:</p> <p>Active-Duty Family Members: No Enrollment Fee</p> <p>Retiree/Retiree Family Member(s): <input type="checkbox"/> \$230 Individual <input type="checkbox"/> \$450 Two or more</p>	
SIGNATURE	RELATIONSHIP TO SPONSOR

SEND THIS ORIGINAL APPLICATION TO FOUNDATION HEALTH



## PRIME ENROLLMENT INSTRUCTIONS



THANK YOU FOR CHOOSING THE TRICARE PRIME PROGRAM. PLEASE PRINT IN INK ALL INFORMATION FOR THE SPONSOR AND EACH ELIGIBLE FAMILY MEMBER BEING ENROLLED. IF YOUR FAMILY'S PERSONAL INFORMATION ON THIS FORM DOES NOT MATCH WHAT DEERS HAS ON FILE, OR IF INFORMATION IS MISSING, YOUR APPLICATION WILL BE DELAYED. IF YOU NEED ASSISTANCE, CALL US AT 1-800-982-0032. A REPRESENTATIVE WILL BE HAPPY TO ASSIST YOU. **MAKE SURE ALL INFORMATION IS COMPLETE AND ACCURATE.**

1. Sponsor's Name - Last name, first name, middle initial.
2. Sponsor's Social Security Number.
3. Sponsor's Residence Address - Street, Apt. Number, City, State, Zip Code. **A RESIDENCE ADDRESS IS REQUIRED.** If only a post office box is listed, the application will be delayed.
4. Sponsor's Sex.
5. Sponsor's Birthdate - Month, Day, Year.
6. Telephone Numbers - Sponsor (Home/Work), Spouse (Work).
7. Is the Sponsor active-duty for more than 30 days? Check the appropriate box (Note: Active-duty personnel are not eligible for TRICARE.)
- 8a. Sponsor's Rank.
- 8b. Sponsor's Pay Grade.
- 8c. Unit of Assignment - Brigade, Wing, Ship, Station, etc.
9. Sponsor's Branch of Service. Check the appropriate box.
10. Is the Sponsor a reservist ordered to active-duty for a period of 31 to 180 days? Check the appropriate box. If Yes, indicate the active-duty separation date.
11. Is the Sponsor deceased? Check the appropriate box.
12. Is the Sponsor retired? Check the appropriate box.
13. Is the Retired Sponsor enrolling? Check the appropriate box.
14. If a Retired Sponsor is enrolling, list Sponsor's Primary Care Manager (PCM) from the directory. **A Primary Care Manager MUST be selected.** Please review your statewide Provider Directory or Primary Care Manager (PCM) Assignments at the Military Treatment Facility (MTF) directory, as applicable, for important information regarding your PCM selection.
15. List the Primary Care Manager's Address, City, State, Zip Code.
16. Indicate whether the Primary Care Manager you have chosen is the current provider.
17. Family Member Information - List information for all eligible Family Members who are enrolling in the TRICARE Prime program. **You MUST select a Primary Care Manager for each Family Member being enrolled.** If more than three members are enrolling, please complete the same information on the reverse side of this sheet. **A DEERS check is part of the enrollment process and all eligible Family Members must be enrolled in DEERS.**
18. If the Sponsor or eligible Family Members have other health coverage, including Medicare, complete this section and provide all the information requested. If you have other insurance, please call 1-800-982-0032. (Note: If you are 65 and eligible for Medicare Part A, you are not eligible for CHAMPUS in most situations.)
19. Indicate whether or not the Sponsor or eligible Family Members have chosen TRICARE Prime instead of other health insurance coverage provided through another source.
20. Indicate whether or not the Sponsor or eligible Family Members are participating in the Program for the Handicapped (PPTH).
21. Specify the last time the Sponsor or eligible Family Members used Standard CHAMPUS.
22. Indicate where you learned about the TRICARE Prime program.
23. PLEASE REVIEW AND INITIAL EACH ITEM TO ACKNOWLEDGE YOUR AGREEMENT. CHECK THE APPROPRIATE BOX INDICATING WHETHER ACTIVE-DUTY FAMILY MEMBERS OR RETIREES/RETIREE FAMILY MEMBER ARE BEING ENROLLED. PLEASE ALSO INDICATE METHOD OF PAYMENT. IF YOU SELECT QUARTERLY PAYMENTS, PLEASE FILL OUT APPROPRIATE SECTION. THE APPLICATION FORM WILL BE PROCESSED AND A TRICARE PRIME IDENTIFICATION CARD WILL BE MAILED TO EACH ENROLLED MEMBER. THE EXPIRATION DATE OF ENROLLMENT WILL BE INDICATED ON EACH CARD. **THE TRICARE PRIME ENROLLMENT APPLICATION MUST BE SIGNED BY THE SPONSOR, SPOUSE, OR OTHER LEGAL GUARDIAN OF THE FAMILY MEMBER BEING ENROLLED.**

RETURN ENROLLMENT FORM TO: Unit 14 • FHFS, Inc. • P.O. Box 2600 • Portland, OR 97207-2600

09-WC01-1202-1800 (7/94)

## REFERENCE LIST

- Andrews, Roxanne M., Barbara A. Curbow, Elizabeth Owen, and Adam Burke. 1989. "The Effects of Method of Presenting Health Plan Information on HMO Enrollment by Medicaid Beneficiaries." *Health Services Research*. August, 24: 3, 311-327
- American Hospital Association, "New Survey Shows Rapid Growth in Hospital Ethics Committees." Press Release, September 1985.
- American College of Healthcare Executives. 1993. "Health Promotion and Prevention Policy Statement." <http://www.ache.org/policy/pps1.html>.
- Barr, Donald A., Thomas Rice, E. Richard Brown and Roberta Wyn 11. 1994. "Do Health Care Premiums Affect Enrollment?" *Journal of the American Medical Association*. March 23, p 902 (2).
- Berki, S.E. and Marie L.F. Ascrat. 1980. "HMO Enrollment: Who Joins What and Why: A Review of the Literature." *Milbank Memorial Fund Quarterly*. Fall.
- Berkowitz, Eric N. 1996. *Essentials of Health Care Marketing*. Aspen Publishers Inc., Gaithersburg, MD.
- Brett, Allan S. 1992. "Sounding Board, The Case Against Persuasive Advertising by Health Maintenance Organizations." *The New England Journal of Medicine*. May 14, Vol. 326, No. 20: 1353-1357.
- Cahill, William R. 1997. Conversation Record Between the Author of This Study and Colonel William R. Cahill, Madigan Army Medical Center, Regarding Value of Expenditure of Advertising Dollars for Healthcare Organizations in the United States.
- Civilian Health and Medical Program for the Uniformed Services (CHAMPUS) Health Benefits Management Course Handbook. 1997. January Edition.
- Cooper, Donald R., C. William Emory. 1995. *Business Research Methods, Fifth Edition*. Richard D. Irwin, Inc., Chicago, IL.
- Conklin, Michelle. 1994. "Marketing must make Integration Transition." *Health Care Strategic Management*. October 12 (10): 15.
- Danaceau, P. 1995. "Medicaid Managed Care." *Health System Leader*. Aug-Sep 2 (7): 4-10.
- Defense Equal Opportunity Management Institute. 1996. <http://www.pafb.af.mil/demi/womsta.htm>. June.

- Duncan, W. Jack, Peter M. Ginter, Linda E. Swayne. 1995. *Strategic Management of Health Care Organizations, 2d Edition*. Blackwell Publishers Inc., Cambridge, MA.
- Fogel, Barry S. 1995. "PACE Demonstration Projects Are Slow to Reach Enrollment Goals." *Gerontologist*. 35: 349-359.
- Feldstein, Paul J. 1993. *Health Care Economics, 4th Edition*. Delmar Publishers, Albany, New York.
- General Accounting Office Report. 1995. "Defense Health Care: Issues and Challenges Confronting Military Medicine." March 22, Report No. HEHS-95-104.
- Hawkins, B. Denise. 1997. "TRICARE Off to a Rocky Start in '96." *The Army Times*. Army Times Publishing Company, Springfield, VA. January 6: 30.
- Hiam, A., C.D. Schewe. 1992. *Segmentation, Targeting, Positioning: The Portable MBA in Marketing*. John Wiley & Sons., New York. 203-234.
- Jones, Karen. 1995. "Delivering the Message." *Health Progress*. April: 41-43.
- Kongstvedt, Peter R. 1995. *Essentials of Managed Health Care*. Aspen, Gaithersburg, MD.
- Koop, C. Everett. 1996. "Manage With Care." *The Frontiers of Medicine*. Time Inc., New York, NY. Fall: 69.
- Kotler, Philip. 1984. *Marketing Management, Analysis, Planning, and Control Fifth Edition*. Prentice-Hall Inc., Englewood Cliffs, NJ.
- Marchack, Baldwin W. 1995. "Market Segmentation and Service: A Strategy for Success." *The Journal of Prosthetic Dentistry*. March: 311-315.
- McGee W.M., R.P. Hudak. 1995. "Reengineering Medical Treatment Facilities for TRICARE: The Medical Group Practice Model." *Military Medicine*. May, 160 (5): 235-9.
- Meines, Mike. 1995. "Marketing -- Identification of Audiences." TRICARE Program Lessons Learned. <http://www.tricare.wa.net/llmkt07.htm>
- Nelson, Karin., Kevin Larsen, Nichole Lurie, Therese Zink, Alfred Pheley and Kathleen Murphy. 1994. "Barriers to Medicaid Enrollment in Minnesota: Some Implications for Health Care Reform." *Journal of the American Medical Association*. Sept 7 Vol. 272; 746.



- Northwest Lead Agency Region 11. 1995. "TRICARE Program Lessons Learned."  
<http://www.tricare.wa.net/11.htm>
- PacifiCare HMO Advertisement. 1997. Secure Horizons.  
<http://www.phs.com/SecureHorizons/California/whois/index.htm>
- Proffas, Jeffrey M. And Eugenia Handler. 1987. "The Complexities of Managed Care: Operating a Voluntary System." *Journal of Health Politics and Law*. Summer Vol. 12 No. 2: 253-269.
- Rakich, Jonathon S., Beaufort B. Longest, Jr., Kurt Darr. 1994. *Managing Health Services Organizations*. Health Professions Press, Baltimore MD.
- Scott, D.L. 1992. " Healthchoice: A Managed Health-Care Program for Low-Income Uninsured Workers." *Journal of the National Medical Association*. April 84 (4); 309-12.
- Taylor, A.K., Beauregard K.M., Vistnes J.P. 1995. " Who Belongs to HMOs: A Comparison of Fee-for-service Versus HMO Enrollee." *Medical Care Research and Review*. Sep 52 (3): 389-408.
- Wurf, Nick. 1996. "TRICARE Prime Beneficiary Survey: Region 11 conducted by Market Metrics for DoD Health Affairs." New York, NY.
- Williams, Stephen J., Paul R. Torrens. 1993. *Introduction to Health Services, Fourth Edition*. Delmar Publishers Inc., Albany NY.